Drinking Water Surveillance Program

# THUNDER BAY (BARE POINT) WATER TREATMENT PLANT

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# THUNDER BAY (BARE POINT) WATER TREATMENT PLANT

## DRINKING WATER SURVEILLANCE PROGRAM

## ANNUAL REPORT 1989

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PIBS 1389

# EXECUTIVE SUMMARY

## DRINKING WATER SURVEILLANCE PROGRAM

## THUNDER BAY (BARE POINT) WATER TREATMENT PLANT
## 1989 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, 65 plants were being monitored.

The Thunder Bay (Bare Point) Water Treatment Plant is a direct filtration plant which treats water from Lake Superior. The treatment process consists of coagulation, flocculation, filtration and disinfection. The plant has a design capacity of 70.46 x 1000 $m^3$/day. This plant together with the Loch Lomond Supply serves a population of approximately 113,000.

The raw and treated water from the plant and from four locations in the distribution system was sampled monthly for approximately 180 parameters. Parameters were divided into the following groups: Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organic (Chloroaromatics, Chlorophenols, Pesticides and PCB, Phenolics, Polyaromatic Hydrocarbons, Specific Pesticides and Volatiles). Chlorophenols and Specific Pesticides were analyzed in June and November only.

A summary of results is shown in Table 1.

Inorganic and Physical parameters were below any applicable health related ODWOs.

Of a total of approximately 110 Organic parameters tested for on a monthly basis, none exceeded health related guidelines.

During 1989 the DWSP sampling results indicated that the Thunder Bay (Bare Point) Water Treatment Plant produced good quality water at the plant and this quality was maintained in the distribution system.

TABLE A

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP)

SUMMARY TABLE BY SCAN

| | SCAN | RAW | | | TREATED | | | SITE 1 | | | SITE 3 | | | SITE 2 | | | SITE 4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TESTS | POSITIVE | %POSITIVE | TESTS | POSITIVE | %POSITIVE | TESTS | POSITIVE | %POSITIVE | TESTS | POSITIVE | %POSITIVE | TESTS | POSITIVE | %POSITIVE | TESTS | POSITIVE | %POSITIVE |
| | BACTERIOLOGICAL | 5 | 2 | 40 | 7 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 |
| | CHEMISTRY (FLD) | 35 | 32 | 91 | 60 | 60 | 100 | 38 | 37 | 97 | 30 | 30 | 100 | 20 | 20 | 100 | 34 | 34 | 100 |
| | CHEMISTRY (LAB) | 220 | 164 | 74 | 220 | 138 | 62 | 140 | 102 | 72 | 159 | 108 | 67 | 70 | 56 | 80 | 168 | 124 | 73 |
| | METALS | 264 | 102 | 38 | 264 | 89 | 33 | 188 | 81 | 43 | 212 | 83 | 39 | 94 | 41 | 43 | 212 | 91 | 42 |
| | CHLOROAROMATICS | 154 | 0 | 0 | 154 | 0 | 0 | 56 | 0 | 0 | 70 | 0 | 0 | 28 | 0 | 0 | 56 | 0 | 0 |
| | CHLOROPHENOLS | 12 | 0 | 0 | 12 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PAH | 176 | 0 | 0 | 176 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PESTICIDES & PCB | 374 | 0 | 0 | 374 | 0 | 0 | 136 | 0 | 0 | 105 | 0 | 0 | 68 | 0 | 0 | 97 | 0 | 0 |
| | PHENOLICS | 11 | 5 | 45 | 11 | 6 | 54 | . | . | . | . | . | . | . | . | . | . | . | . |
| | SPECIFIC PESTICIDES | 64 | 0 | 0 | 64 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | VOLATILES | 261 | 1 | 0 | 261 | 29 | 11 | 87 | 9 | 10 | 116 | 12 | 10 | 29 | 4 | 13 | 145 | 15 | 10 |
| TOTAL | | 1576 | 306 | | 1603 | 322 | | 653 | 229 | | 700 | 233 | | 315 | 121 | | 719 | 264 | |

NO KNOWN HEALTH RELATED GUIDELINES WERE EXCEEDED

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

# DRINKING WATER SURVEILLANCE PROGRAM

# THUNDER BAY (BARE POINT) WATER TREATMENT PLANT
# 1989 ANNUAL REPORT

## INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, 65 plants were being monitored. The DWSP was initiated at the Thunder Bay (Bare Point) Water Treatment Plant in May 1988. An Annual report was published for 1988 (ISSN 0843-8285).

This report contains information and results for 1989.

## PLANT DESCRIPTION

The Thunder Bay (Bare Point) Water Treatment Plant is a direct filtration plant which treats water from Lake Superior. The process consists of coagulation, flocculation, filtration and disinfection. A polyelectrolyte is added as a coagulant aid. The plant has a rated capacity of 70.46 x 1000 $m^3$/day and sample day flows ranging from 32.5 x 1000 $m^3$/day to 46 x 1000 $m^3$/day. This plant together with the Loch Lomond supply serves a population of 113,000.

The plant location is shown in Figure 1. Plant process details, in a block schematic, are shown in Figure 2. General plant information is presented in Table 2.

SAMPLING LOCATIONS

Water samples were obtained from six DWSP approved locations;

i) Plant Raw - The water originated from the raw water wet well prior to chlorination and was sampled through a stainless steel pump and sample line. The sample tap is located in the plant laboratory.

ii) Plant Treated - The water originated from the highlift discharge after addition of all treatment chemicals and was sampled through a stainless steel sample line. The sample tap is located in the plant laboratory.

iii) Distribution System - Site 1 - The house location and sampling conditions are unavailable. This site was sampled four times in 1989.

iv) Distribution System - Site 2 - The house location and sampling conditions are unavailable. This site was sampled twice in 1989.

v) Distribution System - Site 3 - The house location and sampling conditions are unavailable. This site

FIGURE 1

# DRINKING WATER SURVEILLANCE PROGRAM

## SITE LOCATION MAP

### THUNDER BAY (BARE POINT) WATER SUPPLY SYSTEM

FIGURE 2

THUNDER BAY (BARE POINT) WATER TREATMENT PLANT

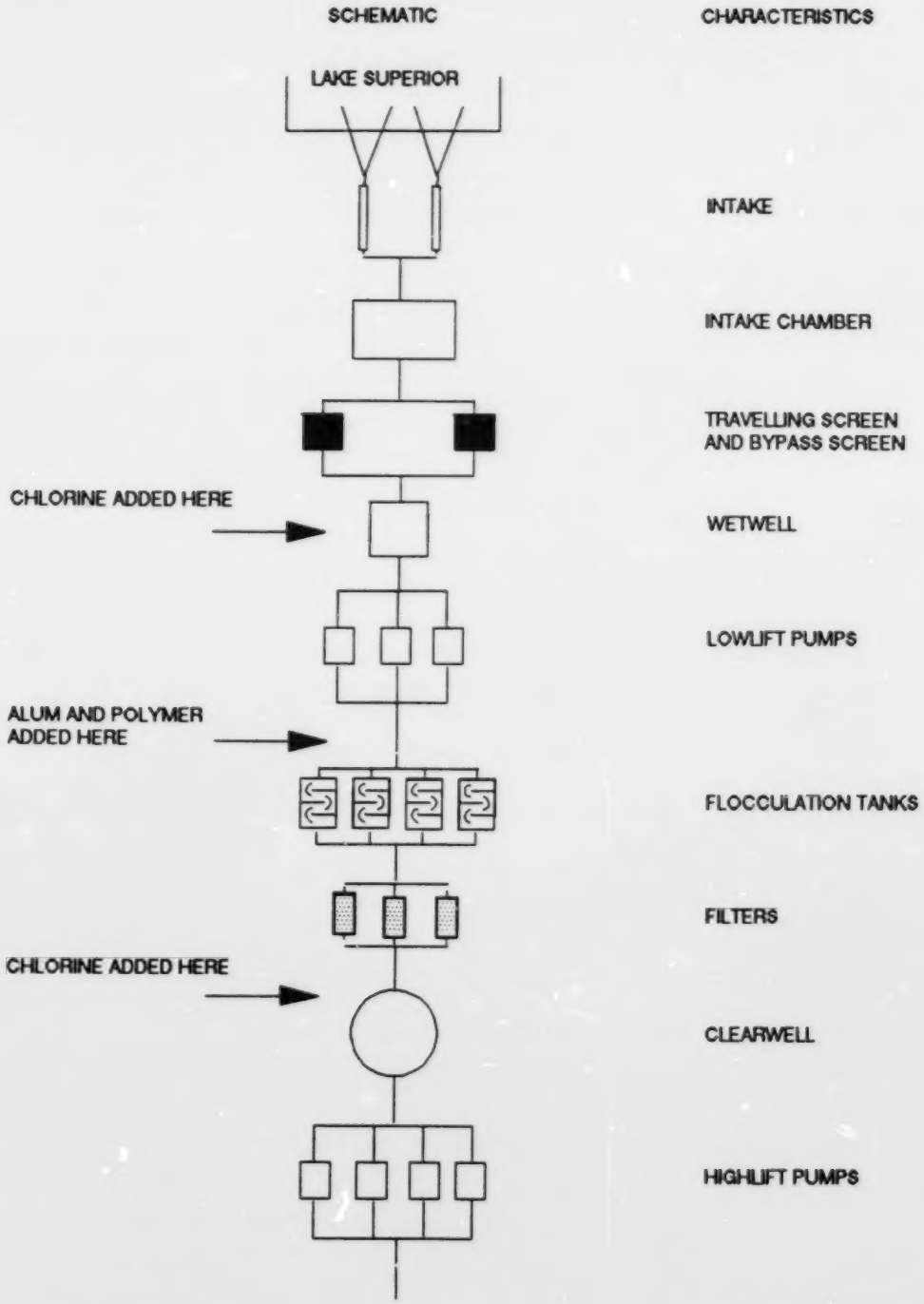

TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

THUNDER BAY (BARE POINT) WATER TREATMENT PLANT

| | |
|---|---|
| LOCATION: | BARE POINT ROAD, RR #13<br>THUNDER BAY, ONTARIO<br>P7B 5E4<br>(807- ) |
| SOURCE: | RAW WATER SOURCE - LAKE SUPERIOR |
| RATED CAPACITY: | 70.46 (1000 $M^3$/DAY) |
| OPERATION: | MUNICIPAL |
| PLANT SUPERINTENDENT: | D. SHANTZ |
| MINISTRY REGION: | NORTHWEST |
| DISTRICT OFFICER: | D. MURRAY |

| MUNICIPALITY SERVED | POPULATION |
|---|---|
| THUNDER BAY | 113,000 |

was sampled five times in 1989.

vi) Distribution System - Site 4 - The house location and sampling conditions are unavailable. This site was sampled five times in 1989.

SAMPLING AND ANALYSES

Sample lines in the plant were flushed prior to sampling to ensure that the water obtained was indicative of its origin and not residual water standing in the sample line.

At the distribution system sites two types of samples were obtained:a standing and a free flow. The standing sample consisted of water that had been in the household plumbing and service connection for minimum of six hours. These samples are used to make an assessment of the amount by which the levels of inorganic compounds and metals may be changed on standing due to leaching from ( or deposition on ) the plumbing system. The only analyses carried out on the standing samples therefore, are General Chemistry and Metals. The free flow sample represented fresh water from the distribution main that had been flowing at the sample tap for five minutes before being sampled.

Attempts were made to capture the same block of water at each sampling point by taking the retention time into consideration.

The retention time was calculated by dividing the volume of water between the two sampling points by the sample day flow. For example, if it was determined that the retention time within the plant was five hours then there would be a five hour interval between the raw and treated sampling. Similarly, if it was estimated that it took approximately one day for the water to travel from the plant to the distribution system site, this site would be sampled one day after the treated water from the plant.

Stringent DWSP sampling protocols were followed to ensure that all samples were taken in a uniform manner.

The Thunder Bay (Bare Point) Water Treatment Plant raw and treated water and four distribution system locations were sampled for approximately 180 parameters on a monthly basis. The Specific Pesticides and Chlorophenols scans were sampled in June and November only. Polyaromatic Hydrocarbons and Phenolics were only analyzed in the raw and treated water at the plant. As of August the triazine pesticides were only analyzed in the raw and treated water. Laboratory analysis was conducted at the Ministry of the Environment facilities in Rexdale, Ontario.

## RESULTS

Field measurements were recorded on the day of sampling and were entered on the DWSP data base as submitted by plant personnel.

Table 3 contains information on the sample day retention time, flow rate and treatment chemicals used and their associated dosages.

Table 4 is a summary break-down of the number of water samples analyzed for by parameter and by water type. The number of times that a positive or trace result was detected is also reported.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 presents the results for parameters detected on at least one occasion.

Table 6 lists all parameters analyzed in the DWSP.

Associated guidelines and detection limits are also supplied on both tables. Parameters are listed alphabetically within each scan.

## DISCUSSION

### General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-8985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters, these are currently under review. When an ODWO is not available guidelines/limits from other agencies are consulted. The Parameters Listing System (PALIS) recently published (ISBN 0-7729-4461-X) by the MOE catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Many of the compounds detected are naturally occurring or are treatment by-products.

Plant operational personnel address occurrences of taste and odour or biological water quality parameters. The DWSP does not assess these aspects of the water supply.

As stated under Results, traces do not indicate quantifiable values, as defined by established MOE Laboratory analytical reporting protocols. The occasional finding of a trace level of a contaminant is thus not considered to be significant. They can be useful in trend analysis, or confirmation of the presence of a specific contaminant that is repeatedly detected at these levels.

**DISCUSSION OF GUIDELINES AND LIMITS THEREFORE, IS ONLY CONDUCTED ON POSITIVE RESULTS.**

Bacteriology

Results for the Bacteriology scan indicate that there were no positive values reported. Bacteriological results were very limited in 1989, the Thunder Bay laboratory will be performing all bacteriological testing for the Thunder Bay plants since the sample do not arrive at the Toronto laboratories within the allotted time period.

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological quality; the routine monitoring program usually requires the taking of multiple samples in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Further, bacteriological limits were developed in acknowledgement that the presence of coliforms may be detected due to their non-uniform distribution throughout the distribution system and the fact that their enumeration is subject to considerable variation. Routine bacteriological monitoring, as outlined in the ODWOs is carried out by the operating authority.

## Inorganic and Physical Parameters

### Laboratory and Field Chemistry

The results for Laboratory and Field Chemistry scans were below any applicable health related ODWOs.

The Langelier Index is used extensively in estimating the corrosion potential of water. An increasingly negative index indicates the increasing possibility of corrosion. It is considered sound engineering practice to maintain a slightly positive Langelier Index. The Langelier Index for Bare Point is consistently negative.

### Metals

The results reported for the Metal scan were below any applicable ODWOs.

Elevated levels of Copper and Zinc were detected in the standing samples as compared to the free flow distribution samples, indicating that these metals were leached from the household plumbing as the water stood overnight. The negative Langelier Index indicates potential for corrosion and some metals will be leached in standing samples.

## Organic Parameters

### Chloroaromatics

The results of the Chloroaromatics scan showed that no chloroaromatics were detected.

### Chlorophenols

The results of the Chlorophenol scan showed that no Chlorophenols were detected.

### Pesticides and PCB

Results of the Pesticides and PCB scan showed that no PCBs were detected and that two pesticides were detected:

Alpha BHC

Lindane

There are several isomers of BHC (benzene hexachloride); gamma BHC is the active ingredient of the pesticide Lindane, while alpha BHC is the isomer most predominantly found in surface waters of the Great Lakes basin as indicated by results from other water supplies on DWSP.

Alpha BHC was detected at trace levels, in ten raw water samples, six treated water samples, three Site 1, two Site 2, three Site 3 and three Site 4 samples.

Lindane was detected at trace levels, once in the raw water, once in the treated water and once in the Site 2 water.

**Specific Pesticides**

The results of the Specific Pesticide scan showed that none were detected.

**Phenolics**

Phenolics were detected in the raw water, ranging from 1.2 µg/L to 4.6 µg/L and in the treated water ranging from 1.0 µg/L to 1.2 µg/L. The maximum desirable concentration of phenolic substances in drinking water is 2.0 µg/L. This limit has been set primarily to prevent the occurrence of undesirable tastes and odours, particularly in chlorinated water. Phenolic compounds are present in the aquatic environment as a result of natural and/or industrial processes.

**Polynuclear Aromatic Hydrocarbons (PAH)**

The results of the PAH scan showed that no PAHs were detected.

**Volatiles**

The results of the Volatile scan showed that six parameters, other than Trihalomethanes(THMs) were detected:

Benzene

Toluene

Ethylbenzene

Ortho-Xylene

Styrene

1,1,1-Trichloroethane

The detection of benzene, ethylbenzene, toluene and the xylenes at low, trace levels is a laboratory artifact derived from the analytical methodology.

The detected trace levels of Styrene are also considered to be laboratory artifacts resulting from the polystyrene shipping containers. The sporadic background levels from this source are in the order of 0.05 µg/L.

1,1,1-Trichloroethane was detected in March, in the treated water (0.20 µg/L) and the Site 2 water (0.36 µg/L). The Maximum Concentration Level set by the United States Environmental Protection Agency for 1,1,1,-Trichloroethane in drinking water is 200 µg/L. 1,1,1-Trichloroethane was also detected at trace levels, once in the raw water and once in the Site 1 water.

THMs are known to be produced during the water treatment process and will always occur in chlorinated surface waters. THMs are comprised mainly of Chloroform, Chlorodibromomethane and Dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs.

Chloroform, Chlorodibromomethane, Dichlorobromomethane and Total THMs were detected in all treated waters. Bromoform was detected once at a trace level. All Total THM occurrences, ranging from 31.9 µg/L to 66.2 µg/L were well below the ODWO of 350 µg/L.

## CONCLUSIONS

The Thunder Bay (Bare Point) Water Treatment Plant for the sample year of 1989 produced good quality water at the plant and this was maintained in the distribution system.

No health related guidelines, for organic or inorganic parameters, were exceeded during 1989.

TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

THUNDER BAY (BARE POINT) WATER TREATMENT PLANT

| | |
|---|---|
| LOCATION: | 500 DONALD STREET EAST<br>THUNDER BAY, ONTARIO<br>P7E 5V3<br>(807-475-1305) |
| SOURCE: | RAW WATER SOURCE - LAKE SUPERIOR |
| RATED CAPACITY: | 70.46 (1000 $M^3$/DAY) |
| OPERATION: | MUNICIPAL |
| PLANT SUPERINTENDENT: | D. SHANTZ |
| MINISTRY REGION: | NORTHWEST |
| DISTRICT OFFICER: | D. MURRAY |

| MUNICIPALITY SERVED | POPULATION |
|---|---|
| THUNDER BAY | 113,000 |

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) SAMPLE DAY CONDITIONS F 1989

| | SAMPLE DAY CONDITIONS | | TREATMENT CHEMICAL DOSAGES (MG/L) | | | |
|---|---|---|---|---|---|---|
| DATE | RETENTION TIME(HRS) | FLOW (1000M3) | PRE-CHLORINATION CHLORINE | COAGULATION ALUM LIQUID | COAGULATION AID POLYELECTROLYTE | POST-CHLORINATION CHLORINE |
| JAN 10 | .5 | 32.5 | 1.67 | 5.03 | .18 | .42 |
| FEB 14 | 1.0 | 37.0 | 1.26 | 5.52 | .19 | .42 |
| MAR 14 | .2 | . | 1.42 | 4.72 | .19 | .42 |
| MAY 08 | . | . | 1.42 | 6.23 | .16 | .47 |
| JUN 12 | . | . | 1.31 | 8.44 | .19 | .44 |
| JUL 11 | . | . | 1.50 | 6.84 | .21 | .51 |
| AUG 15 | .2 | . | 1.67 | 6.21 | .20 | .57 |
| SEP 12 | . | 46.0 | 1.37 | 7.19 | .21 | 2.03 |
| OCT 11 | .2 | . | 1.47 | 7.02 | .18 | .50 |
| NOV 14 | . | . | 1.27 | 5.78 | .20 | .42 |
| DEC 12 | 1.0 | 38.0 | 1.25 | 5.20 | .20 | .25 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | RAW | | | TREATED | | | SITE 1 | | | SITE 3 | | | SITE 2 | | | SITE 4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE |
| BACTERIOLOGICAL | FECAL COLIFORM MF | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | FECAL COLIFORM | . | . | . | 1 | 0 | 0 | 1 | 0 | 0 | . | . | . | 1 | 0 | 0 | . | . | . |
| | STANDRD PLATE CNT MF | . | . | . | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| | COLIFORM | . | . | . | 1 | 0 | 0 | 1 | 0 | 0 | . | . | . | 1 | 0 | 0 | . | . | . |
| | TOTAL COLIFORM MF | 2 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| | T COLIFORM BCKGRD MF | 1 | 1 | 0 | 1 | 0 | 0 | . | . | . | 1 | 0 | 0 | . | . | . | 1 | 0 | 0 |
| *TOTAL SCAN BACTERIOLOGICAL | | 5 | 2 | 0 | 7 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 |
| *TOTAL GROUP BACTERIOLOGICAL | | 5 | 2 | 0 | 7 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 0 |
| CHEMISTRY (FLD) | FLD CHLORINE (COMB) | 1 | 0 | 0 | 10 | 10 | 0 | 7 | 7 | 0 | 6 | 6 | 0 | 4 | 4 | 0 | 7 | 7 | 0 |
| | FLD CHLORINE FREE | 1 | 0 | 0 | 10 | 10 | 0 | 8 | 8 | 0 | 6 | 6 | 0 | 4 | 4 | 0 | 7 | 7 | 0 |
| | FLD CHLORINE (TOTAL) | 1 | 0 | 0 | 10 | 10 | 0 | 7 | 7 | 0 | 6 | 6 | 0 | 4 | 4 | 0 | 7 | 7 | 0 |
| | FLD PH | 11 | 11 | 0 | 10 | 10 | 0 | 8 | 8 | 0 | 6 | 6 | 0 | 4 | 4 | 0 | 7 | 7 | 0 |
| | FLD TEMPERATURE | 11 | 11 | 0 | 10 | 10 | 0 | 8 | 8 | 0 | 6 | 6 | 0 | 4 | 4 | 0 | 7 | 7 | 0 |
| | FLD TURBIDITY | 10 | 10 | 0 | 10 | 10 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| *TOTAL SCAN CHEMISTRY (FLD) | | 35 | 32 | 0 | 60 | 60 | 0 | 38 | 38 | 0 | 30 | 30 | 0 | 20 | 20 | 0 | 34 | 34 | 0 |
| CHEMISTRY (LAB) | ALKALINITY | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| | CALCIUM | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 10 | 10 | 0 |
| | CYANIDE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 |
| | CHLORIDE | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 10 | 10 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| | | SITE | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RAW | | | TREATED | | | SITE 1 | | | SITE 3 | | | SITE 2 | | | SITE 4 | | |
| SCAN | PARAMETER | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE | TOTAL | POSITIVE | TRACE |
| CHEMISTRY (LAB) | COLOUR | 11 | 10 | 1 | 11 | 0 | 10 | 8 | 0 | 6 | 9 | 0 | 9 | 4 | 2 | 1 | 9 | 1 | 8 |
| | CONDUCTIVITY | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| | FLUORIDE | 11 | 1 | 10 | 11 | 1 | 10 | 8 | 0 | 8 | 9 | 3 | 6 | 4 | 0 | 4 | 9 | 0 | 8 |
| | HARDNESS | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 10 | 10 | 0 |
| | IONCAL | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 10 | 9 | 0 | 4 | 4 | 0 | 10 | 9 | 0 |
| | LANGELIERS INDEX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | MAGNESIUM | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 10 | 10 | 0 |
| | SODIUM | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 7 | 1 | 9 | 9 | 0 | 4 | 3 | 1 | 10 | 10 | 0 |
| | AMMONIUM TOTAL | 11 | 7 | 2 | 11 | 4 | 1 | 8 | 5 | 2 | 9 | 0 | 5 | 4 | 4 | 0 | 10 | 1 | 5 |
| | NITRITE | 11 | 5 | 6 | 11 | 1 | 4 | 8 | 2 | 5 | 9 | 0 | 7 | 4 | 2 | 2 | 10 | 2 | 5 |
| | TOTAL NITRATES | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 10 | 10 | 0 |
| | NITROGEN TOT KJELD | 11 | 10 | 1 | 11 | 1 | 10 | 8 | 2 | 6 | 9 | 2 | 7 | 4 | 2 | 2 | 10 | 7 | 3 |
| | PH | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| | PHOSPHORUS FIL REACT | 11 | 0 | 2 | 11 | 0 | 1 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PHOSPHORUS TOTAL | 11 | 0 | 9 | 11 | 0 | 3 | . | . | . | . | . | . | . | . | . | . | . | . |
| | SULPHATE | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| | TURBIDITY | 11 | 10 | 1 | 11 | 10 | 1 | 8 | 6 | 2 | 9 | 4 | 5 | 4 | 3 | 1 | 9 | 8 | 1 |
| *TOTAL SCAN CHEMISTRY (LAB) | | 220 | 164 | 32 | 220 | 138 | 40 | 140 | 102 | 30 | 159 | 108 | 39 | 70 | 56 | 11 | 168 | 124 | 30 |
| METALS | SILVER | 11 | 0 | 1 | 11 | 0 | 4 | 8 | 0 | 6 | 9 | 0 | 2 | 4 | 0 | 4 | 9 | 0 | 3 |
| | ALUMINUM | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| | ARSENIC | 11 | 4 | 7 | 11 | 0 | 10 | 8 | 0 | 8 | 9 | 0 | 9 | 4 | 0 | 4 | 9 | 0 | 7 |
| | BARIUM | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| METALS | BORON | 11 | 2 | 9 | 11 | 3 | 8 | 8 | 4 | 4 | 9 | 1 | 8 | 4 | 1 | 3 | 9 | 1 | 8 |
| | BERYLLIUM | 11 | 0 | 4 | 11 | 0 | 6 | 8 | 0 | 2 | 9 | 0 | 4 | 4 | 0 | 2 | 9 | 0 | 1 |
| | CADMIUM | 11 | 0 | 3 | 11 | 0 | 3 | 8 | 0 | 4 | 9 | 0 | 1 | 4 | 0 | 1 | 9 | 0 | 3 |
| | COBALT | 11 | 0 | 11 | 11 | 0 | 11 | 8 | 0 | 8 | 9 | 0 | 9 | 4 | 0 | 4 | 9 | 0 | 9 |
| | CHROMIUM | 11 | 8 | 2 | 11 | 9 | 0 | 8 | 6 | 2 | 9 | 6 | 2 | 4 | 1 | 1 | 9 | 4 | 2 |
| | COPPER | 11 | 10 | 1 | 11 | 2 | 9 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| | IRON | 11 | 0 | 11 | 11 | 0 | 3 | 8 | 0 | 7 | 9 | 0 | 0 | 4 | 0 | 3 | 9 | 3 | 6 |
| | MERCURY | 11 | 3 | 7 | 11 | 4 | 6 | 4 | 0 | 0 | 5 | 3 | 0 | 2 | 2 | 0 | 5 | 2 | 2 |
| | MANGANESE | 11 | 11 | 0 | 11 | 8 | 3 | 8 | 6 | 2 | 9 | 1 | 8 | 4 | 4 | 0 | 9 | 9 | 0 |
| | MOLYBDENUM | 11 | 0 | 11 | 11 | 0 | 11 | 8 | 0 | 8 | 9 | 0 | 9 | 4 | 0 | 4 | 9 | 0 | 9 |
| | NICKEL | 11 | 0 | 4 | 11 | 0 | 4 | 8 | 0 | 6 | 9 | 0 | 4 | 4 | 1 | 2 | 9 | 0 | 4 |
| | LEAD | 11 | 1 | 6 | 11 | 1 | 6 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 3 | 1 | 9 | 9 | 0 |
| | ANTIMONY | 11 | 10 | 1 | 11 | 10 | 1 | 8 | 8 | 0 | 9 | 8 | 1 | 4 | 4 | 0 | 9 | 9 | 0 |
| | SELENIUM | 11 | 0 | 2 | 11 | 0 | 1 | 8 | 0 | 3 | 9 | 0 | 2 | 4 | 0 | 1 | 9 | 0 | 2 |
| | STRONTIUM | 11 | 11 | 0 | 11 | 11 | 0 | 8 | 8 | 0 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| | TITANIUM | 11 | 9 | 2 | 11 | 9 | 2 | 8 | 8 | 0 | 9 | 6 | 3 | 4 | 4 | 0 | 9 | 7 | 2 |
| | THALLIUM | 11 | 0 | 4 | 11 | 0 | 3 | 8 | 0 | 5 | 9 | [illegible] | 2 | 4 | 0 | 1 | 9 | 0 | 0 |
| | URANIUM | 11 | 0 | 10 | 11 | 0 | 5 | 8 | 0 | 4 | 9 | [illegible] | 2 | 4 | 0 | 4 | [illegible] | 0 | 3 |
| | VANADIUM | 11 | 0 | 11 | 11 | 7 | 4 | 8 | 2 | 6 | 9 | 4 | 5 | 4 | 1 | 3 | 9 | 2 | 7 |
| | ZINC | 11 | 11 | 0 | 11 | 3 | 8 | 8 | 7 | 1 | 9 | 9 | 0 | 4 | 4 | 0 | 9 | 9 | 0 |
| *TOTAL SCAN METALS | | 264 | 102 | 107 | 264 | 89 | 106 | 188 | 81 | 76 | 212 | 83 | 71 | 94 | 41 | 38 | 212 | 91 | 68 |
| *TOTAL GROUP INORGANIC & PHYSICAL | | 519 | 298 | 139 | 544 | 287 | 148 | 366 | 221 | 106 | 401 | 221 | 110 | 184 | 117 | 49 | 414 | 249 | 98 |
| CHLOROAROMATICS | HEXACHLOROBUTADIENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHLOROAROMATICS | 123 TRICHLOROBENZENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 1234 T-CHLOROBENZENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 1235 T-CHLOROBENZENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 124 TRICHLOROBENZENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 1245 T-CHLOROBENZENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 135 TRICHLOROBENZENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | HCB | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | HEXACHLOROETHANE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | OCTACHLOROSTYRENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | PENTACHLOROBENZENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 236 TRICHLOROTOLUENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 245 TRICHLOROTOLUENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 26A TRICHLOROTOLUENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| *TOTAL SCAN CHLOROAROMATICS | | 154 | 0 | 0 | 154 | 0 | 0 | 56 | 0 | 0 | 70 | 0 | 0 | 28 | 0 | 0 | 56 | 0 | 0 |
| CHLOROPHENOLS | 234 TRICHLOROPHENOL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2345 T-CHLOROPHENOL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2356 T-CHLOROPHENOL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | 245-TRICHLOROPHENOL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | 246-TRICHLOROPHENOL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PENTACHLOROPHENOL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| *TOTAL SCAN CHLOROPHENOLS | | 12 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAH | PHENANTHRENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | ANTHRACENE | 10 | 0 | 0 | 10 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | FLUORANTHENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PYRENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENZO(A)ANTHRACENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | CHRYSENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | DIMETH. BENZ(A)ANTHR | 5 | 0 | 0 | 5 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENZO(E) PYRENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENZO(B) FLUORANTHEN | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PERYLENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENZO(K) FLUORANTHEN | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENZO(A) PYRENE | 7 | 0 | 0 | 7 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENZO(G,H,I) PERYLEN | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | DIBENZO(A,H) ANTHRAC | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | INDENO(1,2,3-C,D) PY | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENZO(B) CHRYSENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | CORONENE | 11 | 0 | 0 | 11 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| *TOTAL SCAN PAH | | 176 | 0 | 0 | 176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PESTICIDES & PCB | ALDRIN | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | ALPHA BHC | 11 | 0 | 10 | 11 | 0 | 6 | 4 | 0 | 3 | 5 | 0 | 3 | 2 | 0 | 2 | 4 | 0 | 3 |
| | BETA BHC | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | LINDANE | 11 | 0 | 1 | 11 | 0 | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 1 | 4 | 0 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE: RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PESTICIDES & PCB | ALPHA CHLORDANE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | GAMMA CHLORDANE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | DIELDRIN | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | METHOXYCHLOR | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | ENDOSULFAN I | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | ENDOSULFAN II | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | ENDRIN | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | ENDOSULFAN SULPHATE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | HEPTACHLOR EPOXIDE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | HEPTACHLOR | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | MIREX | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | OXYCHLORDANE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | OPDDT | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | PCB | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | DDD | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | PPDDE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | PPDDT | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | AMETRINE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | ATRAZINE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | ATRATONE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | CYANAZINE (BLADEX) | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | D-ETHYL ATRAZINE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | D-ETHYL SIMAZINE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | PROMETONE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | PROPAZINE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PESTICIDES & PCB | PROMETRYNE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | METRIBUZIN (SENCOR) | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | SIMAZINE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | ALACHLOR (LASSO) | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| | METOLACHLOR | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| *TOTAL SCAN PESTICIDES & PCB | | 374 | 0 | 11 | 374 | 0 | 7 | 136 | 0 | 3 | 105 | 0 | 3 | 68 | 0 | 3 | 97 | 0 | 3 |
| PHENOLICS | PHENOLICS | 11 | 5 | 6 | 11 | 6 | 4 | . | . | . | . | . | . | . | . | . | . | . | . |
| *TOTAL SCAN PHENOLICS | | 11 | 5 | 6 | 11 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SPECIFIC PESTICIDES | TOXAPHENE | 11 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| | 2,4,5-T | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2,4-D | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2,4-DB | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2,4 D PROPIONIC ACID | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | DICAMBA | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PICHLORAM | 0 | 0 | 0 | 0 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | SILVEX | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | DIAZINON | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | DICHLOROVOS | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | CHLORPYRIFOS | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPECIFIC PESTICIDES | ETHION | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | AZINPHOS-METHYL | 0 | 0 | 0 | 0 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | MALATHION | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | MEVINPHOS | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | METHYL PARATHION | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | METHYLTRITHION | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PARATHION | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PHORATE | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | RELDAN | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | RONNEL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | AMINOCARB | 0 | 0 | 0 | 0 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BENOMYL | 1 | 0 | 0 | 1 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BUX | 0 | 0 | 0 | 0 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | CARBOFURAN | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | CICP | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | DIALLATE | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | EPTAM | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | IPC | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | PROPOXUR | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | CARBARYL | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| | BUTYLATE | 2 | 0 | 0 | 2 | 0 | 0 | . | . | . | . | . | . | . | . | . | . | . | . |
| *TOTAL SCAN SPECIFIC PESTICIDES | | 64 | 0 | 0 | 64 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 |
| VOLATILES | BENZENE | 9 | 0 | 0 | 9 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLATILES | TOLUENE | 9 | 0 | 2 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 1 | 1 | 0 | 0 | 5 | 0 | 0 |
| | ETHYLBENZENE | 9 | 0 | 1 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | P-XYLENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | M-XYLENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | O-XYLENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 5 | 0 | 0 |
| | STYRENE | 9 | 0 | 7 | 9 | 0 | 2 | 3 | 0 | 0 | 4 | 0 | 1 | 1 | 0 | 0 | 5 | 0 | 1 |
| | 1,1 DICHLOROETHYLENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | METHYLENE CHLORIDE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | T1,2DICHLOROETHYLENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | 1,1 DICHLOROETHANE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | CHLOROFORM | 9 | 1 | 5 | 9 | 9 | 0 | 3 | 3 | 0 | 4 | 4 | 0 | 1 | 1 | 0 | 5 | 5 | 0 |
| | 111, TRICHLOROETHANE | 9 | 0 | 1 | 9 | 1 | 0 | 3 | 0 | 1 | 4 | 0 | 0 | 1 | 1 | 0 | 5 | 0 | 0 |
| | 1,2 DICHLOROETHANE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | CARBON TETRACHLORIDE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | 1,2 DICHLOROPROPANE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | TRICHLOROETHYLENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | DICHLOROBROMOMETHANE | 9 | 0 | 0 | 9 | 9 | 0 | 3 | 3 | 0 | 4 | 4 | 0 | 1 | 1 | 0 | 5 | 5 | 0 |
| | 112 TRICHLOROETHANE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | CHLORODIBROMOMETHANE | 9 | 0 | 0 | 9 | 1 | 8 | 3 | 0 | 3 | 4 | 0 | 4 | 1 | 0 | 1 | 5 | 0 | 4 |
| | T-CHLOROETHYLENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | BROMOFORM | 9 | 0 | 0 | 9 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | 1122 T-CHLOROETHANE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | CHLOROBENZENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | 1,4 DICHLOROBENZENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | 1,3 DICHLOROBENZENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT)

SUMMARY TABLE OF RESULTS (1989)

| SCAN | PARAMETER | SITE: RAW TOTAL | RAW POSITIVE | RAW TRACE | TREATED TOTAL | TREATED POSITIVE | TREATED TRACE | SITE 1 TOTAL | SITE 1 POSITIVE | SITE 1 TRACE | SITE 3 TOTAL | SITE 3 POSITIVE | SITE 3 TRACE | SITE 2 TOTAL | SITE 2 POSITIVE | SITE 2 TRACE | SITE 4 TOTAL | SITE 4 POSITIVE | SITE 4 TRACE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLATILES | 1,2 DICHLOROBENZENE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | ETHLYENE DIBROMIDE | 9 | 0 | 0 | 9 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 |
| | TOTL TRIHALOMETHANES | 9 | 0 | 2 | 9 | 9 | 0 | 3 | 3 | 0 | 4 | 4 | 0 | 1 | 1 | 0 | 5 | 5 | 0 |
| *TOTAL SCAN VOLATILES | | 261 | 1 | 18 | 261 | 29 | 12 | 87 | 9 | 4 | 116 | 12 | 8 | 29 | 4 | 1 | 145 | 15 | 5 |
| *TOTAL GROUP ORGANIC | | 1052 | 6 | 35 | 1052 | 35 | 23 | 283 | 9 | 7 | 296 | 12 | 11 | 127 | 4 | 4 | 302 | 15 | 8 |
| TOTAL | | 1576 | 306 | 174 | 1603 | 322 | 171 | 653 | 230 | 113 | 700 | 233 | 121 | 315 | 121 | 53 | 719 | 264 | 106 |

## KEY TO TABLE 5 and 6

A ONTARIO DRINKING WATER OBJECTIVES (ODWO)
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
Poor water quality is indicated when :
- total coliform counts > 0 < 5
- P/A Bottle Test is present after 48 hours
- Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
- Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
- Standard Plate Count should not exceed 500 organisms per ml at 35 $^{0}$C within 48 hours

2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
- hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness >200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.

B HEALTH & WELFARE CANADA (H&W)
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, a total)

C WORLD HEALTH ORGANIZATION (WHO)
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV

D US ENVIRONMENTAL PROTECTION AGENCY (EPA)
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria
5. Maximum Contaminant Level Goal (MCLG)

F EUROPEAN ECONOMIC COMMUNITY (EEC)
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissable Concentration (MADC)

G CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE

H USSR MAXIMUM PERMISSIBLE CONCENTRATION

I NEW YORK STATE AMBIENT WATER GUIDELINE

N/A NONE AVAILABLE

## INTERPRETATION OF DATA

The interpretation of analytical results that are obtained from measurements near the limit of detection of the measurement process is subject to greater uncertainty than those at higher concentrations. The principle areas of concern relate to whether the substance has actually been detected, whether it has been properly identified, and whether it is an artifact of the measurement process. In other words, false positives can be caused by the instrumentation or the test procedures used, when in fact these compounds are not present in the sample.

There are several methods to treat data from such measurements:
1. Exclude the low-level data because of this uncertainty factor. However, studies of long-term environmental trends and modelling may be adversely affected by exclusion of such data.
2. Qualify these data so the user is aware of the greater uncertainty associated with their use.

For the Drinking Water Surveillance Program, measurements near the limit of detection of the measurement process are reported qualified by the code "<T". Results quantified by "W" indicate a zero measurement. These results are reported for purposes of modelling and long-term trend analysis and no significance should be attributed to a single determination of a substance below "T" (a single determination may well be a false positive). Repeat analysis or additional data are needed before it can be stated with certainty that the substance in question was truly present. On the other hand, it is less likely that repeated detection of a substance at or near the limit of detection at a specific location is solely due to an artifact in the measurement system, and more likely represents a true positive. However the average of such data is still only an estimate of the amount of substance present subject to the possible biases of the method used.

## LABORATORY RESULTS, REMARK DESCRIPTIONS

| | |
|---|---|
| . | No Sample Taken |
| BDL | Below Minimum Measurable Amount |
| <T | Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE) |
| > | Results Are Greater Than The Upper Limit |
| <=> | Approximate Result |
| !AW | No Data: Analysis Withdrawn |
| !CR | No Data: Could Not Confirm By Reanalysis |
| !CS | No Data: Contamination Suspected |
| !IL | No Data: Sample Incorrectly Labelled |
| !IP | No Data: Insufficient Preservative |
| !IS | No Data: Insufficient Sample |

| | |
|---|---|
| !LA | No Data: Laboratory Accident |
| !LD | No Data: Test Queued After Sample Discarded |
| !NA | No Data: No Authorization To Perform Reanalysis |
| !NP | No Data: No Procedure |
| !NR | No Data: Sample Not Received |
| !OP | No Data: Obscured Plate |
| !QU | No Data: Quality Control Unacceptable |
| !PE | No Data: Procedural Error - Sample Discarded |
| !PH | No Data: Sample pH Outside Valid Range |
| !RE | No Data: Received Empty |
| !RO | No Data: See Attached Report (no numeric results) |
| !SM | No Data: Sample Missing |
| !SS | No Data: Send Separate Sample Properly Preserved |
| !UI | No Data: Indeterminant Interference |
| !TX | No Data: Time Expired |
| A3C | Approximate, Total Count Exceeded 300 Colonies |
| APL | Additional Peak, Large, Not Priority Pollutant |
| APS | Additional Peak, Less Than, Not Priority Pollutant |
| CIC | Possible Contamination, Improper Cap |
| CRO | Calculated Result Only |
| PPS | Test Performed On Preserved Sample |
| RMP | P and M-Xylene Not Separated |
| RRV | Rerun Verification |
| RVU | Reported Value Unusual |
| SPS | Several Peaks, Small, Not Priority Pollutant |
| UCR | Unreliable: Could Not Confirm By Reanalysis |
| UCS | Unreliable: Contamination Suspected |
| UIN | Unreliable: Indeterminant Interference |
| XP | Positive After X Number of Hours |
| T# (T06) | Result Taken After # Hours |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| **BACTERIOLOGICAL** | | | | | | | | | | |
| **FECAL COLIFORM ( )** | | | DET'N LIMIT = N/A | | GUIDELINE = 0 (A1) | | | | | |
| MAR | . | 0 | . | 0 | . | . | . | 0 | . | . |
| **STANDRD PLATE CNT MF ( )** | | | DET'N LIMIT = 0 | | GUIDELINE = 500/ML (A1) | | | | | |
| MAR | . | 0 | . | 0 | . | . | . | 0 | . | . |
| JUL | . | 0 <=> | . | . | . | . | . | . | . | 8 < |
| DEC | . | . | . | . | . | 1 <=> | . | . | . | . |
| **COLIFORM ( )** | | | DET'N LIMIT = N/A | | GUIDELINE = 0 (A1) | | | | | |
| MAR | . | 0 | . | 0 | . | . | . | 0 | . | . |
| **TOTAL COLIFORM MF (CT/100ML )** | | | DET'N LIMIT = 0 | | GUIDELINE = 5/100ML(A1) | | | | | |
| MAR | BDL | 0 | . | 0 | . | . | . | 0 | . | . |
| JUL | 76 A3C | 0 | . | . | . | . | . | . | . | 0 |
| DEC | . | . | . | . | . | 0 | . | . | . | . |
| **T COLIFORM BCKGRD MF (CT/100ML )** | | | DET'N LIMIT = 0 | | GUIDELINE = N/A | | | | | |
| JUL | 6000 A3C | 0 | . | . | . | . | . | . | . | 0 |
| DEC | . | . | . | . | . | 0 | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| CHEMISTRY (FLD) | | | | | | | | | | |
| FLD CHLORINE (COMB) ( ) | | | DET'N LIMIT = N/A | | GUIDELINE = N/A | | | | | |
| JAN | . | .070 | .200 | .100 | . | . | .100 | .100 | . | . |
| FEB | . | .070 | .200 | .500 | . | . | . | . | . | . |
| MAR | . | .100 | .100 | .200 | . | . | .100 | .200 | . | . |
| MAY | . | .070 | . | .100 | . | . | . | . | . | . |
| JUN | . | .200 | . | . | . | . | . | . | . | . |
| JUL | . | .070 | . | . | . | . | . | . | .200 | .200 |
| AUG | . | .070 | . | . | .200 | . | . | . | .250 | . |
| SEP | .000 | . | . | . | .150 | .150 | . | . | .200 | .200 |
| OCT | . | .080 | . | . | 1.100 | . | . | . | .200 | . |
| NOV | . | .080 | . | . | 1.100 | . | . | . | .200 | . |
| DEC | . | .070 | . | . | .250 | . | . | . | . | . |
| FLD CHLORINE FREE ( ) | | | DET'N LIMIT = N/A | | GUIDELINE = N/A | | | | | |
| JAN | . | 1.340 | .500 | 1.100 | . | . | 1.000 | 1.200 | . | . |
| FEB | . | 1.350 | 1.300 | .500 | . | . | . | . | . | . |
| MAR | . | 1.400 | .500 | 1.100 | . | . | 1.100 | 1.300 | . | . |
| MAY | . | 1.240 | .100 | 1.100 | . | . | . | . | . | . |
| JUN | . | 1.300 | . | . | . | . | . | . | . | . |
| JUL | . | 1.190 | . | . | . | . | . | . | .900 | .900 |
| AUG | . | 1.330 | . | . | .900 | . | . | . | .950 | . |
| SEP | .000 | . | . | . | 1.100 | 1.100 | . | . | .900 | .900 |
| OCT | . | 1.500 | . | . | .900 | . | . | . | 1.100 | . |
| NOV | . | 1.000 | . | . | .900 | . | . | . | .900 | . |
| DEC | . | 1.000 | . | . | .750 | . | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FLD CHLORINE (TOTAL) ( ) | | | DET'N LIMIT = N/A | | GUIDELINE = N/A | | | | | |
| JAN | . | 1.410 | .700 | 1.200 | . | . | 1.100 | 1.300 | . | . |
| FEB | . | 1.370 | 1.100 | . | . | . | . | . | . | . |
| MAR | . | 1.500 | .600 | 1.300 | . | . | 1.100 | 1.500 | . | . |
| MAY | . | 1.310 | .100 | 1.300 | . | . | . | . | . | . |
| JUN | . | 1.500 | . | . | . | . | . | . | . | . |
| JUL | . | 1.260 | . | . | . | . | . | . | 1.100 | 1.100 |
| AUG | . | 1.400 | . | . | 1.100 | . | . | . | 1.200 | . |
| SEP | .000 | . | . | . | 1.250 | 1.250 | . | . | 1.100 | 1.100 |
| OCT | . | 1.500 | . | . | .200 | . | . | . | 1.300 | . |
| NOV | . | 1.080 | . | . | 2.000 | . | . | . | 1.100 | . |
| DEC | . | 1.070 | . | . | 1.000 | . | . | . | . | . |
| FLD PH (DMNSLESS ) | | | DET'N LIMIT = N/A | | GUIDELINE = 6.5-8.5(A4) | | | | | |
| JAN | 7.500 | 7.700 | 7.200 | 7.600 | . | . | 7.200 | 7.400 | . | . |
| FEB | 7.300 | 7.100 | 7.400 | 7.400 | . | . | . | . | . | . |
| MAR | 7.400 | 7.800 | 7.400 | 7.600 | . | . | 7.400 | 7.200 | . | . |
| MAY | 7.400 | 7.200 | 7.300 | 7.400 | . | . | . | . | . | . |
| JUN | 7.700 | 7.100 | . | . | . | . | . | . | . | . |
| JUL | 7.600 | 7.200 | . | . | . | . | . | . | 7.200 | 7.200 |
| AUG | 7.400 | 7.500 | . | . | 7.500 | . | . | . | 7.500 | . |
| SEP | 7.500 | . | . | . | 7.300 | 7.300 | . | . | 7.200 | 7.200 |
| OCT | 7.300 | 7.500 | . | . | 7.400 | . | . | . | 6.900 | . |
| NOV | 7.300 | 7.500 | . | . | 7.500 | . | . | . | 7.000 | . |
| DEC | 7.500 | 7.200 | . | . | 7.400 | . | . | . | . | . |
| FLD TEMPERATURE (DEG.C ) | | | DET'N LIMIT = N/A | | GUIDELINE = 15 (A1) | | | | | |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| JAN | 1.000 | 2.000 | 11.500 | 3.300 | . | . | 10.000 | 6.000 | . | . |
| FEB | 2.000 | 2.000 | 12.000 | 2.000 | . | . | . | . | . | . |
| MAR | 2.000 | 2.000 | 12.000 | 2.000 | . | . | 8.000 | 4.000 | . | . |
| MAY | 4.500 | 4.500 | 12.000 | 3.000 | . | . | . | . | . | . |
| JUN | 8.000 | 8.000 | . | . | . | . | . | . | . | . |
| JUL | 12.000 | 12.000 | . | . | . | . | . | . | 12.000 | 12.000 |
| AUG | 10.000 | 10.000 | . | . | 12.000 | . | . | . | 12.000 | . |
| SEP | 10.000 | . | . | . | 12.000 | 12.000 | . | . | 14.000 | 14.000 |
| OCT | 9.000 | 9.000 | . | . | 11.000 | . | . | . | . | . |
| NOV | 7.000 | 7.000 | . | . | 9.000 | . | . | . | 7.000 | . |
| DEC | 4.000 | 4.000 | . | . | 6.000 | . | . | . | . | . |
| FLD TURBIDITY (FTU ) | | | DET'N LIMIT = N/A | | GUIDELINE = 1.0 (A1) | | | | | |
| JAN | .470 | .090 | . | . | . | . | . | . | . | . |
| FEB | .550 | .090 | . | . | . | . | . | . | . | . |
| MAR | .350 | .120 | . | . | . | . | . | . | . | . |
| MAY | .420 | .080 | . | . | . | . | . | . | . | . |
| JUN | .770 | .080 | . | . | . | . | . | . | . | . |
| JUL | .550 | .100 | . | . | . | . | . | . | . | . |
| AUG | . | .080 | . | . | . | . | . | . | . | . |
| SEP | .470 | . | . | . | . | . | . | . | . | . |
| OCT | .600 | .060 | . | . | . | . | . | . | . | . |
| NOV | .800 | .080 | . | . | . | . | . | . | . | . |
| DEC | .600 | .090 | . | . | . | . | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | | WATER TREATMENT PLANT | | | DISTRIBUTION SYSTEM | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| CHEMISTRY (LAB) | | | | | | | | | | |
| ALKALINITY (MG/L ) | | | DET'N LIMIT = .200 | | GUIDELINE = 30-500 (A4) | | | | | |
| JAN | 45.900 | 40.700 | 42.200 | 42.300 | . | . | 40.800 | 41.700 | . | . |
| FEB | 46.200 | 41.200 | 42.500 | 42.100 | . | . | . | . | . | . |
| MAR | 45.200 | 40.300 | 41.700 | 41.600 | . | . | 40.400 | 41.200 | . | . |
| MAY | 44.400 | 38.500 | 40.300 | 40.000 | . | . | . | . | . | . |
| JUN | 43.600 | 37.200 | . | . | . | . | . | . | . | . |
| JUL | 45.200 | 38.700 | . | . | . | . | . | . | 38.600 | 38.800 |
| AUG | 44.900 | 38.600 | . | . | 42.600 | 41.700 | . | . | 39.300 | 39.200 |
| SEP | 45.500 | 39.200 | . | . | 43.200 | 42.700 | . | . | 39.900 | 39.900 |
| OCT | 44.700 | 39.600 | . | . | 41.200 | 40.600 | . | . | 39.300 | 39.200 |
| NOV | 45.500 | 39.500 | . | . | 41.700 | 41.800 | . | . | IIS | 39.600 |
| DEC | 45.000 | 39.200 | . | . | . | 41.900 | . | . | . | . |
| CALCIUM (MG/L ) | | | DET'N LIMIT = .100 | | GUIDELINE = 100 (F2) | | | | | |
| JAN | 14.200 | 13.800 | 14.200 | 14.400 | . | . | 14.200 | 14.000 | . | . |
| FEB | 15.200 | 15.600 | 16.200 | 16.000 | . | . | . | . | . | . |
| MAR | 14.400 | 14.600 | 15.000 | 15.400 | . | . | 15.200 | 15.200 | . | . |
| MAY | 14.200 | 14.000 | 14.800 | 14.400 | . | . | . | . | . | . |
| JUN | 12.400 | 11.600 | . | . | . | . | . | . | . | . |
| JUL | 14.400 | 14.600 | . | . | . | . | . | . | 14.400 | 14.600 |
| AUG | 13.800 | 14.000 | . | . | 15.400 | 15.800 | . | . | 14.400 | 15.200 |
| SEP | 14.600 | 14.600 | . | . | 16.000 | 15.600 | . | . | 14.800 | 14.400 |
| OCT | 15.200 | 15.600 | . | . | 17.200 | 16.600 | . | . | 14.800 | 15.000 |
| NOV | 15.400 | 14.800 | . | . | 16.200 | 17.000 | . | . | 15.800 | 15.600 |
| DEC | 14.400 | 14.600 | . | . | . | 14.800 | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| CHLORIDE (MG/L ) | | | DET'N LIMIT = .200 | | GUIDELINE = 250 (A3) | | | | | |
| JAN | 1.700 | 3.100 | 3.300 | 3.200 | . | . | 3.300 | 3.100 | . | . |
| FEB | 1.800 | 3.100 | 3.400 | 3.200 | . | . | . | . | . | . |
| MAR | 1.600 | 3.000 | 3.300 | 2.800 | . | . | 3.100 | 2.800 | . | . |
| MAY | 1.700 | 3.400 | 4.000 | 3.500 | . | . | . | . | . | . |
| JUN | 1.300 | 1.600 | . | . | . | . | . | . | . | . |
| JUL | 1.900 | 3.600 | . | . | . | . | . | . | 4.000 | 3.700 |
| AUG | 1.700 | 3.500 | . | . | 3.800 | 3.900 | . | . | 3.800 | 3.600 |
| SEP | 1.700 | 3.700 | . | . | 4.000 | 3.600 | . | . | 3.700 | 3.700 |
| OCT | 1.600 | 3.200 | . | . | 3.600 | 3.400 | . | . | 3.400 | 3.400 |
| NOV | 1.600 | 2.900 | . | . | 3.000 | 3.000 | . | . | 3.100 | 3.100 |
| DEC | 1.700 | 3.400 | . | . | . | 3.000 | . | . | . | . |
| COLOUR (HZU ) | | | DET'N LIMIT = .5 | | GUIDELINE = 5.0 (A3) | | | | | |
| JAN | 2.500 | .500 <T | BDL | BDL | . | . | 4.500 | BDL | . | . |
| FEB | 2.500 | .500 <T | .500 <T | .500 <T | . | . | . | . | . | . |
| MAR | .500 <T | 1.000 <T | .500 <T | 1.000 <T | . | . | .500 <T | 12.000 | . | . |
| MAY | 3.000 | 1.000 <T | 1.500 <T | 1.000 <T | . | . | . | . | . | . |
| JUN | 3.000 | .500 <T | . | . | . | . | . | . | . | . |
| JUL | 4.500 | 1.500 <T | . | . | . | . | . | . | 2.000 <T | 1.500 <1 |
| AUG | 3.000 | BDL | . | . | 1.000 <T | 1.000 <T | . | . | 2.000 <T | 2.000 <1 |
| SEP | 3.000 | 1.000 <T | . | . | 1.000 <T | .500 <T | . | . | 2.500 | 1.500 <1 |
| OCT | 3.000 | .500 <T | . | . | 1.500 <T | 1.000 <T | . | . | 1.000 <T | 1.500 <1 |
| NOV | 2.500 | .500 <T | . | . | .500 <T | .500 <T | . | . | IIS | 1.000 <1 |
| DEC | 3.000 | 1.000 <T | . | . | . | .500 <T | . | . | . | . |
| CONDUCTIVITY (UMHO/CM ) | | | DET'N LIMIT = 1 | | GUIDELINE = 400 (F2) | | | | | |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| JAN | 102 | 106 | 108 | 107 | . | . | 106 | 106 | . | . |
| FEB | 104 | 107 | 110 | 109 | . | . | . | . | . | . |
| MAR | 104 | 107 | 109 | 108 | . | . | 108 | 108 | . | . |
| MAY | 102 | 105 | 109 | 108 | . | . | . | . | . | . |
| JUN | 99 | 103 | . | . | . | . | . | . | . | . |
| JUL | 102 | 105 | . | . | . | . | . | . | 108 | 106 |
| AUG | 100 | 104 | . | . | 112 | 111 | . | . | 107 | 106 |
| SEP | 103 | 108 | . | . | 113 | 111 | . | . | 107 | 107 |
| OCT | 102 | 105 | . | . | 115 | 113 | . | . | 105 | 105 |
| NOV | 102 | 105 | . | . | 109 | 109 | . | . | 115 | 105 |
| DEC | 104 | 107 | . | . | . | 108 | . | . | . | . |
| FLUORIDE (MG/L ) | | | DET'N LIMIT = .01 | | GUIDELINE = 2.400 (A1) | | | | | |
| JAN | .040 <T | .040 <T | .020 <T | .020 <T | . | . | .020 <T | .040 <T | . | . |
| FEB | .040 <T | .040 <T | .040 <T | .040 <T | . | . | . | . | . | . |
| MAR | .020 <T | .020 <T | .020 <T | .020 <T | . | . | .040 <T | .020 <T | . | . |
| MAY | .040 <T | .040 <T | .040 <T | .040 <T | . | . | . | . | . | . |
| JUN | .040 <T | .020 <T | . | . | . | . | . | . | . | . |
| JUL | .040 <T | .040 <T | . | . | . | . | . | . | .040 <T | .040 < |
| AUG | .060 | .040 <T | . | . | .060 | .060 | . | . | .040 <T | .020 < |
| SEP | .040 <T | .040 <T | . | . | .020 <T | .040 <T | . | . | .020 <T | .020 < |
| OCT | .040 <T | .020 <T | . | . | .020 <T | .020 <T | . | . | .020 <T | BDL |
| NOV | .040 <T | .020 <T | . | . | .020 <T | .020 <T | . | . | 115 | .020 < |
| DEC | .040 <T | .020 | . | . | . | .020 | . | . | . | . |
| HARDNESS (MG/L ) | | | DET'N LIMIT = .500 | | GUIDELINE = 80-100 (A4) | | | | | |
| JAN | 47.000 | 47.000 | 47.000 | 47.000 | . | . | 47.000 | 47.000 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | |
|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | 51.000 | 51.000 | 53.000 | 53.000 | . | . | . | . | . | . |
| MAR | 48.000 | 49.000 | 50.000 | 50.000 | . | . | 49.000 | 50.000 | . | . |
| MAY | 48.000 | 48.000 | 49.000 | 48.000 | . | . | . | . | . | . |
| JUN | 42.000 | 40.000 | . | . | . | . | . | . | . | . |
| JUL | 47.000 | 48.000 | . | . | . | . | . | . | 48.000 | 48.000 |
| AUG | 48.000 | 48.000 | . | . | 50.000 | 51.000 | . | . | 49.000 | 51.000 |
| SEP | 49.000 | 49.000 | . | . | 52.000 | 51.000 | . | . | 49.000 | 48.000 |
| OCT | 51.000 | 52.000 | . | . | 55.000 | 53.000 | . | . | 50.000 | 50.000 |
| NOV | 51.000 | 50.000 | . | . | 52.000 | 55.000 | . | . | 51.000 | 51.000 |
| DEC | 48.000 | 48.000 | . | . | . | 48.000 | . | . | . | . |
| IONCAL (DIMNSLESS ) | | | DET'N LIMIT = N/A | | GUIDELINE = N/A | | | | | |
| JAN | 2.935 | 4.801 | 6.886 | 5.650 | . | . | 4.819 | 7.525 | . | . |
| FEB | .501 | 2.552 | 3.643 | 2.344 | . | . | . | . | . | . |
| MAR | 3.653 | 2.588 | 4.046 | .127 | . | . | 2.314 | .338 | . | . |
| MAY | .667 | .547 | 1.788 | .695 | . | . | . | . | . | . |
| JUN | 9.076 | 9.659 | . | . | . | . | . | . | . | . |
| JUL | .808 | 2.704 | . | . | . | . | . | . | . | . |
| AUG | 1.549 | .659 | . | . | 4.182 | 1.979 | . | . | .313 | 1.755 |
| SEP | 1.431 | .350 | . | . | 2.252 | 1.864 | . | . | .941 | 7.643 |
| OCT | 5.179 | 5.392 | . | . | 5.412 | 2.639 | . | . | .181 | 1.931 |
| NOV | 3.746 | 1.780 | . | . | 2.599 | 4.218 | . | . | 2.233 | 4.186 |
| DEC | .863 | .208 | . | . | .000 NAF | 3.632 | . | . | .000 NAF | 1.600 |
| LANGELIERS INDEX (DIMNSLESS ) | | | DET'N LIMIT = N/A | | GUIDELINE = N/A | | | | | |
| JAN | -.674 | -1.011 | -.843 | -.896 | . | . | -.817 | -.914 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | |
|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | -.633 | -.873 | -.714 | -.703 | . | . | . | . | . | . |
| MAR | -.656 | -.961 | -.665 | -.694 | . | . | -.693 | -.854 | . | . |
| MAY | -.549 | -.698 | -.636 | -.641 | . | . | . | . | . | . |
| JUN | -.824 | -1.064 | . | . | . | . | . | . | . | . |
| JUL | -.565 | -.708 | . | . | . | . | . | . | -.696 | -.787 |
| AUG | -.775 | -1.127 | . | . | -.776 | -.784 | . | . | -.858 | -.935 |
| SEP | -.686 | -.863 | . | . | -.784 | -.689 | . | . | -.679 | -.841 |
| OCT | -.616 | -.829 | . | . | -.674 | -.705 | . | . | -.765 | -.730 |
| NOV | -.553 | -.753 | . | . | -.642 | -.590 | . | . | . | -.669 |
| DEC | -.678 | -.843 | . | . | . | -.719 | . | . | . | . |
| MAGNESIUM (MG/L ) | | | DET'N LIMIT = .050 | | GUIDELINE = 30 (F2) | | | | | |
| JAN | 2.900 | 3.000 | 2.800 | 2.800 | . | . | 2.800 | 2.800 | . | . |
| FEB | 3.100 | 2.900 | 3.000 | 3.100 | . | . | . | . | . | . |
| MAR | 2.900 | 2.900 | 2.900 | 3.000 | . | . | 2.700 | 3.000 | . | . |
| MAY | 3.100 | 3.100 | 3.000 | 3.000 | . | . | . | . | . | . |
| JUN | 2.800 | 2.700 | . | . | . | . | . | . | . | . |
| JUL | 2.900 | 2.900 | . | . | . | . | . | . | 2.900 | 2.800 |
| AUG | 3.300 | 3.200 | . | . | 2.800 | 2.700 | . | . | 3.100 | 3.300 |
| SEP | 2.900 | 3.000 | . | . | 2.800 | 2.800 | . | . | 3.000 | 3.000 |
| OCT | 3.100 | 3.200 | . | . | 3.000 | 2.900 | . | . | 3.000 | 3.100 |
| NOV | 3.100 | 3.100 | . | . | 2.800 | 2.900 | . | . | 2.900 | 2.900 |
| DEC | 2.900 | 2.900 | . | . | . | 2.700 | . | . | . | . |
| SODIUM (MG/L ) | | | DET'N LIMIT = .200 | | GUIDELINE = 200 (C3) | | | | | |
| JAN | 1.800 | 1.800 | 1.800 | 1.800 | . | . | 1.800 | 1.600 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | 1.600 | 1.600 | 1.800 | 1.200 | . | . | . | . | . | . |
| MAR | 1.200 | 1.000 | 1.000 <T | 1.000 | . | . | 1.000 | 1.000 <T | . | . |
| MAY | 1.800 | 1.600 | 1.600 | 1.800 | . | . | . | . | . | . |
| JUN | 1.200 | 1.400 | . | . | . | . | . | . | . | . |
| JUL | 2.000 | 2.000 | . | . | . | . | . | . | 2.000 | 2.000 |
| AUG | 1.800 | 1.600 | . | . | 2.000 | 2.000 | . | . | 2.600 | 2.600 |
| SEP | 1.600 | 1.800 | . | . | 1.600 | 1.600 | . | . | 1.600 | 1.600 |
| OCT | 1.800 | 1.800 | . | . | 2.000 | 1.800 | . | . | 1.800 | 1.800 |
| NOV | 1.600 | 1.600 | . | . | 1.600 | 1.600 | . | . | 1.600 | 1.600 |
| DEC | 2.200 | 2.000 | . | . | . | 1.800 | . | . | . | . |
| AMMONIUM TOTAL (MG/L ) | | | DET'N LIMIT = 0.002 | | GUIDELINE = .05 (F2) | | | | | |
| JAN | .014 | .012 | .018 | .012 | . | . | .042 | .012 | . | . |
| FEB | .002 | .002 | BDL | .002 | . | . | . | . | . | . |
| MAR | .002 | .002 | .002 | .002 | . | . | .002 | .002 | . | . |
| MAY | .006 <T | BDL | .004 <T | .002 <T | . | . | . | . | . | . |
| JUN | .016 | .010 | . | . | . | . | . | . | . | . |
| JUL | .012 | .002 <T | . | . | . | . | . | . | .008 <T | .012 |
| AUG | .010 | BDL | . | . | .006 <T | .004 <T | . | . | .008 <T | .008 < |
| SEP | .010 | BDL | . | . | .002 <T | BDL | . | . | BDL | BDL |
| OCT | .002 <T | BDL | . | . | .004 <T | .002 <T | . | . | .004 <T | BDL |
| NOV | BDL | BDL | . | . | BDL | BDL | . | . | .002 <T | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| NITRITE (MG/L ) | | | DET'N LIMIT = 0.001 | | GUIDELINE = 1.000 (A1) | | | | | |
| JAN | .002 <T | BDL | .002 <T | BDL | . | . | .002 <T | .001 <T | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .005 | .002 <T | .004 <T | .002 <T | . | . | . | . | . | . |
| MAR | .001 | .001 | .001 | .001 | . | . | .001 | .001 | . | . |
| MAY | .005 | .002 <T | .004 <T | .003 <T | . | . | . | . | . | . |
| JUN | .007 | .004 <T | . | . | . | . | . | . | . | . |
| JUL | .002 <T | BDL | . | . | . | . | . | . | .001 <T | .001 < |
| AUG | .002 <T | BDL | . | . | .001 <T | .001 <T | . | . | .006 | .006 |
| SEP | .002 <T | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| OCT | .002 <T | BDL | . | . | .001 <T | .001 <T | . | . | .001 <T | BDL |
| NOV | .005 | BDL | . | . | .002 <T | .002 <T | . | . | .003 <T | .001 < |
| DEC | .003 <T | .001 <T | . | . | . | .002 <T | . | . | . | . |
| TOTAL NITRATES (MG/L ) | | | DET'N LIMIT = .020 | | GUIDELINE = 10.000 (A1) | | | | | |
| JAN | .315 | .310 | .310 | .305 | . | . | .440 | .310 | . | . |
| FEB | .320 | .320 | .325 | .325 | . | . | . | . | . | . |
| MAR | .325 | .325 | .330 | .325 | . | . | .445 | .325 | . | . |
| MAY | .315 | .325 | .330 | .315 | . | . | . | . | . | . |
| JUN | .165 | .170 | . | . | . | . | . | . | . | . |
| JUL | .260 | .265 | . | . | . | . | . | . | .370 | .265 |
| AUG | .280 | .265 | . | . | .235 | .240 | . | . | .255 | .260 |
| SEP | .300 | .270 | . | . | .305 | .295 | . | . | .285 | .300 |
| OCT | .315 | .320 | . | . | .315 | .305 | . | . | .315 | .310 |
| NOV | .335 | .330 | . | . | .325 | .300 | . | . | .330 | .320 |
| DEC | .315 | .330 | . | . | . | .325 | . | . | . | . |
| NITROGEN TOT KJELD (MG/L ) | | | DET'N LIMIT = .020 | | GUIDELINE = N/A | | | | | |
| JAN | .150 | .070 <T | .090 <T | .070 <T | . | . | .120 | .070 <T | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .090 <T | .060 <T | .080 <T | .060 <T | . | . | . | . | . | . |
| MAR | .110 | .050 <T | .080 <T | .060 <T | . | . | .110 | .060 <T | . | . |
| MAY | .130 | .080 <T | .130 | .330 | . | . | . | . | . | . |
| JUN | .100 | .050 <T | . | . | . | . | . | . | . | . |
| JUL | .150 | .090 <T | . | . | . | . | . | . | .170 | .100 |
| AUG | .140 | .080 <T | . | . | .100 | .110 | . | . | .110 | .130 |
| SEP | .130 | .080 <T | . | . | .090 <T | .060 <T | . | . | .120 | .070 <T |
| OCT | .110 | .070 <T | . | . | .080 <T | .090 <T | . | . | .110 | .080 <T |
| NOV | .110 | .060 <T | . | . | .080 <T | .060 <T | . | . | .120 | .080 <T |
| DEC | .190 | .110 | . | . | . | .080 <T | . | . | . | . |
| PH (DIMNSLESS ) | | | DET'N LIMIT = N/A | | GUIDELINE = 6.5-8.5(A4) | | | | | |
| JAN | 7.870 | 7.600 | 7.740 | 7.680 | . | . | 7.780 | 7.680 | . | . |
| FEB | 7.880 | 7.680 | 7.810 | 7.830 | . | . | . | . | . | . |
| MAR | 7.890 | 7.630 | 7.900 | 7.860 | . | . | 7.880 | 7.710 | . | . |
| MAY | 8.010 | 7.930 | 7.950 | 7.960 | . | . | . | . | . | . |
| JUN | 7.800 | 7.660 | . | . | . | . | . | . | . | . |
| JUL | 7.980 | 7.900 | . | . | . | . | . | . | 7.920 | 7.820 |
| AUG | 7.790 | 7.500 | . | . | 7.770 | 7.760 | . | . | 7.750 | 7.650 |
| SEP | 7.850 | 7.740 | . | . | 7.740 | 7.850 | . | . | 7.910 | 7.760 |
| OCT | 7.910 | 7.740 | . | . | 7.840 | 7.830 | . | . | 7.830 | 7.860 |
| NOV | 7.960 | 7.840 | . | . | 7.890 | 7.920 | . | . | IIS | 7.900 |
| DEC | 7.870 | 7.760 | . | . | . | 7.850 | . | . | . | . |
| PHOSPHORUS FIL REACT (MG/L ) | | | DET'N LIMIT = .0005 | | GUIDELINE = N/A | | | | | |
| JAN | .001 <T | .000 <T | . | . | . | . | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .000 | .000 | . | . | . | . | . | . | . | . |
| MAR | .000 | .000 | . | . | . | . | . | . | . | . |
| MAY | BDL | BDL | . | . | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | . |
| AUG | BDL | BDL | . | . | . | . | . | . | . | . |
| SEP | BDL | BDL | . | . | . | . | . | . | . | . |
| OCT | .000 | .000 | . | . | . | . | . | . | . | . |
| NOV | BDL | BDL | . | . | . | . | . | . | . | . |
| DEC | .001 <T | BDL | . | . | . | . | . | . | . | . |
| PHOSPHORUS TOTAL (MG/L ) | | | DET'N LIMIT = .002 | | GUIDELINE = .40 (F2) | | | | | |
| JAN | .003 <T | BDL | . | . | . | . | . | . | . | . |
| FEB | BDL | BDL | . | . | . | . | . | . | . | . |
| MAR | .002 <T | BDL | . | . | . | . | . | . | . | . |
| MAY | .003 <T | BDL | . | . | . | . | . | . | . | . |
| JUN | .006 <T | .002 <T | . | . | . | . | . | . | . | . |
| JUL | .004 <T | .002 <T | . | . | . | . | . | . | . | . |
| AUG | .005 <T | BDL | . | . | . | . | . | . | . | . |
| SEP | .002 <T | BDL | . | . | . | . | . | . | . | . |
| OCT | .004 <T | BDL | . | . | . | . | . | . | . | . |
| NOV | BDL | BDL | . | . | . | . | . | . | . | . |
| DEC | .004 <T | .002 <T | . | . | . | . | . | . | . | . |
| SULPHATE (MG/L ) | | | DET'N LIMIT = .200 | | GUIDELINE = 500. (A3) | | | | | |
| JAN | 3.280 | 6.730 | 6.230 | 6.170 | . | . | 6.200 | 6.310 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | 3.860 | 6.040 | 5.990 | 6.010 | . | . | . | . | . | . |
| MAR | 3.560 | 5.930 | 5.850 | 5.930 | . | . | 5.800 | 5.740 | . | . |
| MAY | 3.690 | 6.170 | 6.320 | 6.230 | . | . | . | . | . | . |
| JUN | 3.080 | 6.960 | . | . | . | . | . | . | . | . |
| JUL | 2.900 | 6.340 | . | . | . | . | . | . | 6.250 | 6.220 |
| AUG | 4.300 | 7.160 | . | . | 7.490 | 7.620 | . | . | 7.970 | 7.620 |
| SEP | 3.510 | 7.200 | . | . | 6.000 | 5.860 | . | . | 6.440 | 6.310 |
| OCT | 3.680 | 7.580 | . | . | 8.800 | 8.950 | . | . | 6.550 | 6.550 |
| NOV | 3.580 | 7.170 | . | . | 6.650 | 8.050 | . | . | IIS | 8.030 |
| DEC | 4.400 | 7.140 | . | . | . | 6.290 | . | . | . | . |
| TURBIDITY (FTU ) | | | DET'N LIMIT = .02 | | GUIDELINE = 1.00 (A1) | | | | | |
| JAN | .640 | .420 | .380 | .370 | . | . | .330 | 1.050 RRV | . | . |
| FEB | .750 | .850 | .780 | .550 | . | . | . | . | . | . |
| MAR | .400 | .130 <T | .220 <T | .230 <T | . | . | .400 | .160 <T | . | . |
| MAY | .840 | .430 | .820 | .720 | . | . | . | . | . | . |
| JUN | 1.150 | .850 | . | . | . | . | . | . | . | . |
| JUL | .940 | .280 | . | . | . | . | . | . | .620 | .360 |
| AUG | .750 | .600 | . | . | .700 | .550 | . | . | .750 | .800 |
| SEP | .130 <T | .600 | . | . | .070 <T | .090 <T | . | . | .460 | .200 <T |
| OCT | .680 | .530 | . | . | .740 | .400 | . | . | .740 | .690 |
| NOV | .670 | .760 | . | . | .150 <T | .180 <T | . | . | IIS | .360 |
| DEC | 1.100 | .370 | . | . | . | .200 <T | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| **METALS** | | | | | | | | | | |
| **SILVER (UG/L )** | | | DET'N LIMIT = .020 | | GUIDELINE = 50. (A1) | | | | | |
| JAN | BDL | .210 <T | .060 <T | .100 <T | . | . | .100 <T | .070 <T | . | . |
| FEB | BDL | .170 <T | BDL | .100 <T | . | . | . | . | . | . |
| MAR | BDL | .190 <T | .030 <T | .080 <T | . | . | .060 <T | .180 <T | . | . |
| MAY | .080 <T | .040 <T | .080 <T | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | . |
| AUG | BDL | BDL | . | . | .030 <T | BDL | . | . | .190 <T | .050 <T |
| SEP | BDL | BDL | . | . | BDL | .050 <T | . | . | .050 <T | IIP |
| OCT | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| NOV | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| **ALUMINUM (UG/L )** | | | DET'N LIMIT = .050 | | GUIDELINE = 100.(A4) | | | | | |
| JAN | 13.920 | 19.720 | 18.560 | 18.560 | . | . | 17.400 | 18.560 | . | . |
| FEB | 7.888 | 20.880 | 20.880 | 24.360 | . | . | . | . | . | . |
| MAR | 10.092 | 20.880 | 17.400 | 18.560 | . | . | 18.560 | 18.560 | . | . |
| MAY | 12.760 | 30.160 | 54.520 | 44.080 | . | . | . | . | . | . |
| JUN | 12.000 | 43.000 | . | . | . | . | . | . | . | . |
| JUL | 15.000 | 83.000 | . | . | . | . | . | . | . | . |
| AUG | 22.000 | 32.000 | . | . | 54.000 | 74.000 | . | . | 62.000 | 50.000 |
| SEP | 12.000 | 8.200 | . | . | 33.000 | 34.000 | . | . | 42.000 | IIP |
| OCT | 11.000 | 26.000 | . | . | 26.000 | 27.000 | . | . | 42.000 | 37.000 |
| NOV | 12.000 | 28.000 | . | . | 20.000 | 19.000 | . | . | 24.000 | 25.000 |
| DEC | 14.000 | 31.000 | . | . | . | 20.000 | . | . | 17.000 | 16.000 |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| METALS | | | | | | | | | | |
| SILVER (UG/L ) | | | | DET'N LIMIT = .020 GUIDELINE = 50. (A1) | | | | | | |
| JAN | BDL | .210 <T | .060 <T | .100 <T | . | . | .100 <T | .070 <T | . | . |
| FEB | BDL | .170 <T | BDL | .100 <T | . | . | . | . | . | . |
| MAR | BDL | .190 <T | .030 <T | .080 <T | . | . | .060 <T | .180 <T | . | . |
| MAY | .080 <T | .040 <T | .080 <T | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | .190 <T | .050 < |
| AUG | BDL | BDL | . | . | .030 <T | BDL | . | . | .050 <T | IIP |
| SEP | BDL | BDL | . | . | BDL | .050 <T | . | . | BDL | BDL |
| OCT | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| NOV | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| ALUMINUM (UG/L ) | | | | DET'N LIMIT = .050 GUIDELINE = 100.(A4) | | | | | | |
| JAN | 13.920 | 19.720 | 18.560 | 18.560 | . | . | 17.400 | 18.560 | . | . |
| FEB | 7.888 | 20.880 | 20.880 | 24.360 | . | . | . | . | . | . |
| MAR | 10.092 | 20.880 | 17.400 | 18.560 | . | . | 18.560 | 18.560 | . | . |
| MAY | 12.760 | 30.160 | 54.520 | 44.080 | . | . | . | . | . | . |
| JUN | 12.000 | 43.000 | . | . | . | . | . | . | . | . |
| JUL | 15.000 | 83.000 | . | . | . | . | . | . | 62.000 | 50.000 |
| AUG | 22.000 | 32.000 | . | . | 54.000 | 74.000 | . | . | 42.000 | IIP |
| SEP | 12.000 | 8.200 | . | . | 33.000 | 34.000 | . | . | 42.000 | 37.000 |
| OCT | 11.000 | 26.000 | . | . | 26.000 | 27.000 | . | . | 24.000 | 25.000 |
| NOV | 12.000 | 28.000 | . | . | 20.000 | 19.000 | . | . | 17.000 | 16.000 |
| DEC | 14.000 | 31.000 | . | . | . | 20.000 | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | | | WATER TREATMENT PLANT | | | | DISTRIBUTION SYSTEM | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| **ARSENIC (UG/L )** | | | DET'N LIMIT = 0.050 GUIDELINE = 50.0 (A1) | | | | | | | |
| JAN | .590 <T | .180 <T | .260 <T | .150 <T | . | . | .140 <T | .140 <T | . | . |
| FEB | 1.200 | .270 <T | .320 <T | .630 <T | . | . | . | . | . | . |
| MAR | 1.100 | .340 <T | .360 <T | .430 <T | . | . | .270 <T | .470 <T | . | . |
| MAY | .310 <T | .240 <T | .070 <T | .110 <T | . | . | . | . | . | . |
| JUN | 1.100 | .570 <T | . | . | . | . | . | . | . | . |
| JUL | .260 <T | BDL | . | . | . | . | . | . | BDL | BDL |
| AUG | 1.100 | .420 <T | . | . | .450 <T | .660 <T | . | . | .340 <T | IIP |
| SEP | .660 <T | .420 <T | . | . | .120 <T | .390 <T | . | . | .410 <T | .330 < |
| OCT | .440 <T | .130 <T | . | . | .120 <T | .080 <T | . | . | .150 <T | .220 < |
| NOV | .410 <T | .270 <T | . | . | .150 <T | .180 <T | . | . | .110 <T | .170 < |
| DEC | .510 <T | .180 <T | . | . | . | .180 <T | . | . | . | . |
| **BARIUM (UG/L )** | | | DET'N LIMIT = 0.020 GUIDELINE = 1000. (A1) | | | | | | | |
| JAN | 10.000 | 10.000 | 11.000 | 9.700 | . | . | 9.800 | 10.000 | . | . |
| FEB | 10.000 | 10.000 | 11.000 | 10.000 | . | . | . | . | . | . |
| MAR | 10.000 | 10.000 | 11.000 | 10.000 | . | . | 10.000 | 9.900 | . | . |
| MAY | 11.000 | 10.000 | 12.000 | 10.000 | . | . | . | . | . | . |
| JUN | 11.000 | 10.000 | . | . | . | . | . | . | . | . |
| JUL | 11.000 | 11.000 | . | . | . | . | . | . | 13.000 | 11.000 |
| AUG | 10.000 | 10.000 | . | . | 11.000 | 12.000 | . | . | 11.000 | IIP |
| SEP | 11.000 | 9.900 | . | . | 11.000 | 11.000 | . | . | 11.000 | 11.000 |
| OCT | 10.000 | 10.000 | . | . | 12.000 | 12.000 | . | . | 10.000 | 10.000 |
| NOV | 10.000 | 10.000 | . | . | 10.000 | 11.000 | . | . | 9.900 | 9.800 |
| DEC | 9.700 | 9.400 | . | . | . | 9.200 | . | . | . | . |
| **BORON (UG/L )** | | | DET'N LIMIT = 0.200 GUIDELINE = 5000. (A1) | | | | | | | |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| JAN | 16.000 <T | 14.000 <T | 14.000 <T | 3.800 <T | . | . | 3.500 <T | 7.900 <T | . | . |
| FEB | 34.000 | 29.000 | 31.000 | 7.100 <T | . | . | . | . | . | . |
| MAR | 28.000 | 26.000 | 21.000 | 17.000 <T | . | . | 14.000 <T | 24.000 | . | . |
| MAY | 8.200 <T | 32.000 | 49.000 | 41.000 | . | . | . | . | . | . |
| JUN | 17.000 <T | 11.000 <T | . | . | . | . | . | . | . | . |
| JUL | 15.000 <T | 15.000 <T | . | . | . | . | . | . | 11.000 <T | 10.000 < |
| AUG | 20.000 <T | 18.000 <T | . | . | 19.000 <T | 19.000 <T | . | . | 8.200 <T | IIP |
| SEP | 19.000 <T | 3.700 <T | . | . | 5.600 <T | 21.000 | . | . | 21.000 | 6.700 < |
| OCT | 9.800 <T | 10.000 <T | . | . | 11.000 <T | 10.000 <T | . | . | 6.500 <T | 9.800 < |
| NOV | 11.000 <T | 12.000 <T | . | . | 11.000 <T | 9.800 <T | . | . | 5.700 <T | 5.700 < |
| DEC | 6.700 <T | 6.100 <T | . | . | . | 5.900 <T | . | . | . | . |
| BERYLLIUM (UG/L ) | | | DET'N LIMIT = 0.010 GUIDELINE = N/A | | | | | | | |
| JAN | BDL | .020 <T | BDL | BDL | . | . | BDL | BDL | . | . |
| FEB | .120 <T | BDL | BDL | BDL | . | . | . | . | . | . |
| MAR | .090 <T | .100 <T | .050 <T | .130 <T | . | . | .040 <T | .090 <T | . | . |
| MAY | BDL | BDL | BDL | BDL | . | . | . | . | . | . |
| JUN | BDL | .030 <T | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | BDL | BDL |
| AUG | .120 <T | .080 <T | . | . | .110 <T | .070 <T | . | . | BDL | IIP |
| SEP | BDL | BDL | . | . | BDL | BDL | . | . | .020 <T | BDL |
| OCT | .020 <T | .020 <T | . | . | .040 <T | .030 <T | . | . | BDL | BDL |
| NOV | BDL | .020 <T | . | . | BDL | BDL | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| CADMIUM (UG/L ) | | | DET'N LIMIT = 0.050 GUIDELINE = 5.000 (A1) | | | | | | | |
| JAN | .090 <T | .080 <T | .070 <T | .080 <T | . | . | BDL | BDL | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .090 <T | BDL | .060 <T | .090 <T | . | . | . | . | . | . |
| MAR | BDL | BDL | BDL | BDL | . | . | .090 <T | BDL | . | . |
| MAY | BDL | BDL | BDL | BDL | . | . | . | . | . | . |
| JUN | BDL | .060 <T | . | . | . | . | . | . | . | . |
| JUL | BDL | .070 <T | . | . | . | . | . | . | . | . |
| AUG | .080 <T | BDL | . | . | . | . | . | . | .330 <T | BDL |
| SEP | BDL | BDL | . | . | BDL | BDL | . | . | BDL | IIP |
| OCT | BDL | BDL | . | . | .110 <T | BDL | . | . | .060 <T | .080 < |
| NOV | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| | | | | | | BDL | . | . | . | . |
| COBALT (UG/L ) | | | DET'N LIMIT = 0.020 GUIDELINE = N/A | | | | | | | |
| JAN | .040 <T | .070 <T | .060 <T | .060 <T | . | . | .070 <T | .130 <T | . | . |
| FEB | .170 <T | .160 <T | .210 <T | .170 <T | . | . | . | . | . | . |
| MAR | .100 <T | .130 <T | .170 <T | .110 <T | . | . | .140 <T | .170 <T | . | . |
| MAY | .060 <T | .070 <T | .060 <T | .100 <T | . | . | . | . | . | . |
| JUN | .120 <T | .120 <T | . | . | . | . | . | . | . | . |
| JUL | .150 <T | .170 <T | . | . | . | . | . | . | .180 <T | .140 <1 |
| AUG | .120 <T | .140 <T | . | . | .160 <T | .120 <T | . | . | .090 <T | IIP |
| SEP | .150 <T | .310 <T | . | . | .130 <T | .150 <T | . | . | .150 <T | .160 <1 |
| OCT | .040 <T | .060 <T | . | . | .080 <T | .050 <T | . | . | .040 <T | .070 <1 |
| NOV | .060 <T | .050 <T | . | . | .050 <T | .070 <T | . | . | .030 <T | .060 <1 |
| DEC | .070 <T | .070 <T | . | . | . | .070 <T | . | . | . | . |
| CHROMIUM (UG/L ) | | | DET'N LIMIT = 0.100 GUIDELINE = 50. (A1) | | | | | | | |
| JAN | 2.600 | 2.400 | 2.300 | .190 <T | . | . | BDL | BDL | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SITE | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | 4.300 | 4.000 | 4.100 | .320 <T | . | . | . | . | . | . |
| MAR | 3.200 | 2.900 | 2.100 | 1.600 | . | . | .680 <T | 2.800 | . | . |
| MAY | .130 <T | 2.300 | 3.600 | 2.900 | . | . | . | . | . | . |
| JUN | 2.500 | 1.300 | . | . | . | . | . | . | . | . |
| JUL | 2.600 | 2.800 | . | . | . | . | . | . | 1.700 | 1.500 |
| AUG | 2.500 | 2.500 | . | . | 2.600 | 2.600 | . | . | .720 <T | IIP |
| SEP | 2.300 | BDL | . | . | .400 <T | 2.300 | . | . | 2.100 | BDL |
| OCT | 2.000 | 2.100 | . | . | 2.100 | 2.200 | . | . | .310 <T | 2.000 |
| NOV | 1.000 <T | 1.300 | . | . | 1.100 | .700 <T | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| COPPER (UG/L ) | | | DET'N LIMIT = .100 GUIDELINE = 1000 (A3) | | | | | | | |
| JAN | 1.100 | 1.000 <T | 170.000 | 20.000 | . | . | 4.900 | 4.800 | . | . |
| FEB | 1.200 | .860 <T | 230.000 | 27.000 | . | . | . | . | . | . |
| MAR | 1.500 | .980 <T | 210.000 | 22.000 | . | . | 32.000 | 5.300 | . | . |
| MAY | 1.500 | .910 <T | 240.000 | 22.000 | . | . | . | . | . | . |
| JUN | 1.200 | .790 <T | . | . | . | . | . | . | . | . |
| JUL | 1.500 | 1.000 <T | . | . | . | . | . | . | 65.000 | 12.000 |
| AUG | 1.400 | .890 <T | . | . | 290.000 | 42.000 | . | . | 48.000 | IIP |
| SEP | 1.200 | 13.000 | . | . | 55.000 | 46.000 | . | . | 24.000 | 20.000 |
| OCT | 1.500 | .930 <T | . | . | 240.000 | 59.000 | . | . | 31.000 | 29.000 |
| NOV | 1.300 | 1.100 | . | . | 68.000 | 48.000 | . | . | 16.000 | 25.000 |
| DEC | 1.400 <T | .850 <T | . | . | . | 28.000 | . | . | . | . |
| IRON (UG/L ) | | | DET'N LIMIT = 4.000 GUIDELINE = 300. (A3) | | | | | | | |
| JAN | 20.000 <T | 13.000 <T | 23.000 <T | 21.000 <T | . | . | 10.000 <T | 18.000 <T | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | RAW | TREATED | WATER TREATMENT PLANT SITE 1 STANDING | SITE 1 FREE FLOW | DISTRIBUTION SYSTEM SITE 3 STANDING | SITE 3 FREE FLOW | SITE 2 STANDING | SITE 2 FREE FLOW | SITE 4 STANDING | SITE 4 FREE FLOW |
|---|---|---|---|---|---|---|---|---|---|---|
| FEB | 15.000 <T | BDL | 6.100 <T | 9.700 <T | . | . | . | . | . | . |
| MAR | 17.000 <T | 14.000 <T | 6.600 <T | 6.000 <T | . | . | 5.600 <T | BDL | . | . |
| MAY | 15.000 <T | BDL | 10.000 <T | BDL | . | . | . | . | . | . |
| JUN | 18.000 <T | BDL | . | . | . | . | . | . | . | . |
| JUL | 34.000 <T | BDL | . | . | . | . | . | . | 46.000 <T | 42.000 <T |
| AUG | 31.000 <T | BDL | . | . | BDL | BDL | . | . | 77.000 | IIP |
| SEP | 19.000 <T | BDL | . | . | BDL | BDL | . | . | 77.000 | 63.000 |
| OCT | 12.000 <T | BDL | . | . | BDL | BDL | . | . | 27.000 <T | 30.000 <T |
| NOV | 12.000 <T | 12.000 <T | . | . | BDL | BDL | . | . | 46.000 <T | 34.000 <T |
| DEC | 13.000 <T | BDL | . | . | . | BDL | . | . | . | . |
| MERCURY (UG/L ) | | | DET'N LIMIT = 0.010 GUIDELINE = 1.000 (A1) | | | | | | | |
| JAN | .030 <T | .020 <T | . | BDL | . | . | . | .080 | . | . |
| FEB | .030 <T | .020 <T | . | BDL | . | . | . | . | . | . |
| MAR | .050 <T | .040 <T | . | BDL | . | . | . | .130 | . | . |
| MAY | .030 <T | .040 <T | . | BDL | . | . | . | . | . | . |
| JUN | .050 <T | .040 <T | . | . | . | . | . | . | . | . |
| JUL | .070 | .080 | . | . | . | . | . | . | . | .060 |
| AUG | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| SEP | .020 <T | .040 <T | . | . | . | BDL | . | . | . | .040 <T |
| OCT | .030 <T | .060 | . | . | . | .060 | . | . | . | .040 <T |
| NOV | .120 | .110 | . | . | . | .140 | . | . | . | .070 |
| DEC | .290 | .300 | . | . | . | .160 | . | . | . | . |
| MANGANESE (UG/L ) | | | DET'N LIMIT = .050 GUIDELINE = 50.0 (A3) | | | | | | | |
| JAN | 1.100 | .560 | .670 | .700 | . | . | .530 | .630 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | 1.500 | .490 <T | .410 <T | .610 | . | . | . | . | . | . |
| MAR | 1.300 | .470 <T | .310 <T | .560 | . | . | .670 | .520 | . | . |
| MAY | 1.800 | 1.100 | .960 | .940 | . | . | . | . | . | . |
| JUN | 1.000 | .600 | . | . | . | . | . | . | . | . |
| JUL | 2.600 | 1.100 | . | . | . | . | . | . | 3.600 | 3.300 |
| AUG | 1.900 | .630 | . | . | .470 <T | .260 <T | . | . | 2.500 | IIP |
| SEP | 1.700 | .190 <T | . | . | .170 <T | .220 <T | . | . | 2.800 | 2.200 |
| OCT | 1.500 | .720 | . | . | .580 | .450 <T | . | . | 1.500 | 1.700 |
| NOV | .970 | 1.000 | . | . | .110 <T | .110 <T | . | . | 2.300 | 1.700 |
| DEC | 3.000 | 1.700 | . | . | . | .380 <T | . | . | . | . |
| MOLYBDENUM (UG/L ) | | | DET'N LIMIT = 0.020 GUIDELINE = N/A | | | | | | | |
| JAN | .090 <T | .120 <T | .120 <T | .150 <T | . | . | .110 <T | .120 <T | . | . |
| FEB | .350 <T | .260 <T | .350 <T | .330 <T | . | . | . | . | . | . |
| MAR | .300 <T | .260 <T | .280 <T | .250 <T | . | . | .220 <T | .190 <T | . | . |
| MAY | .290 <T | .300 <T | .300 <T | .300 <T | . | . | . | . | . | . |
| JUN | .190 <T | .190 <T | . | . | . | . | . | . | . | . |
| JUL | .270 <T | .330 <T | . | . | . | . | . | . | .220 <T | .110 < |
| AUG | .250 <T | .320 <T | . | . | .300 <T | .350 <T | . | . | .240 <T | IIP |
| SEP | .270 <T | .310 <T | . | . | .280 <T | .190 <T | . | . | .270 <T | .200 < |
| OCT | .120 <T | .110 <T | . | . | .130 <T | .110 <T | . | . | .130 <T | .140 < |
| NOV | .060 <T | .080 <T | . | . | .090 <T | .100 <T | . | . | .100 <T | .090 < |
| DEC | .150 <T | .150 <T | . | . | . | .110 <T | . | . | . | . |
| NICKEL (UG/L ) | | | DET'N LIMIT = 0.100 GUIDELINE = 50. (F3) | | | | | | | |
| JAN | BDL | BDL | 1.000 <T | BDL | . | . | BDL | .270 <T | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .430 <T | .440 <T | 1.800 <T | .560 <T | . | . | . | . | . | . |
| MAR | .180 <T | .240 <T | 1.800 <T | .380 <T | . | . | 3.300 | .350 <T | . | . |
| MAY | BDL | BDL | .320 <T | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | .110 <T | BDL |
| AUG | .340 <T | .310 <T | . | . | .610 <T | .400 <T | . | . | .140 <T | IIP |
| SEP | .380 <T | .250 <T | . | . | .220 <T | .210 <T | . | . | BDL | .150 < |
| OCT | BDL | BDL | . | . | BDL | BDL | . | . | BDL | .240 < |
| NOV | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| LEAD (UG/L ) | | | DET'N LIMIT = 0.050 GUIDELINE = 50. (A1) | | | | | | | |
| JAN | .040 <T | .040 <T | 1.400 | .220 | . | . | .190 <T | .310 | . | . |
| FEB | BDL | .030 <T | 1.900 | .440 | . | . | . | . | . | . |
| MAR | .090 <T | .140 <T | 1.600 | .460 | . | . | 2.200 | .480 | . | . |
| MAY | .160 <T | BDL | 2.100 | .300 | . | . | . | . | . | . |
| JUN | .260 | .260 | . | . | . | . | . | . | . | . |
| JUL | .180 <T | .050 <T | . | . | . | . | . | . | 7.000 | 1.400 |
| AUG | .030 <T | .120 <T | . | . | 8.900 | 1.700 | . | . | 4.500 | IIP |
| SEP | .040 <T | BDL | . | . | 1.300 | 1.800 | . | . | 2.400 | 1.700 |
| OCT | BDL | BDL | . | . | 2.800 | 2.400 | . | . | 3.000 | 3.700 |
| NOV | BDL | .060 <T | . | . | .830 | 1.900 | . | . | 1.200 | 1.400 |
| DEC | BDL | BDL | . | . | . | .830 | . | . | . | . |
| ANTIMONY (UG/L ) | | | DET'N LIMIT = .050 GUIDELINE = 146. (D4) | | | | | | | |
| JAN | .340 | .320 | .330 | .370 | . | . | .260 | .420 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .530 | .520 | .530 | .640 | . | . | . | . | . | . |
| MAR | .590 | .600 | .710 | .590 | . | . | .680 | .660 | . | . |
| MAY | .530 | .570 | .580 | .520 | . | . | . | . | . | . |
| JUN | .710 | .810 | . | . | . | . | . | . | . | . |
| JUL | .800 | .670 | . | . | . | . | . | . | . | . |
| AUG | .650 | .610 | . | . | .710 | .650 | . | . | .770 | .670 |
| SEP | .510 | 3.100 | . | . | .500 | .600 | . | . | .550 | IIP |
| OCT | .380 | .440 | . | . | .520 | .400 | . | . | .530 | .480 |
| NOV | .380 | .310 | . | . | .350 | .290 | . | . | .370 | .370 |
| DEC | .400 <T | .390 <T | . | . | . | .370 <T | . | . | .300 | .300 |
| SELENIUM (UG/L ) | | | DET'N LIMIT = 0.200 GUIDELINE = 10. (A1) | | | | | | | |
| JAN | BDL | BDL | .440 <T | BDL | . | . | BDL | BDL | . | . |
| FEB | BDL | BDL | BDL | BDL | . | . | . | . | . | . |
| MAR | .410 <T | BDL | .690 <T | BDL | . | . | BDL | 1.800 <T | . | . |
| MAY | .750 <T | BDL | .320 <T | BDL | . | . | . | . | . | . |
| JUN | BDL | 1.400 <T | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | . |
| AUG | BDL | BDL | . | . | 1.300 <T | 1.300 <T | . | . | 1.900 <T | 1.500 <T |
| SEP | BDL | BDL | . | . | BDL | BDL | . | . | BDL | IIP |
| OCT | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| NOV | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| STRONTIUM (UG/L ) | | | DET'N LIMIT = .050 GUIDELINE = N/A | | | | | | | |
| JAN | 22.000 | 23.000 | 24.000 | 24.000 | . | . | 23.000 | 25.000 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | RAW | TREATED | WATER TREATMENT PLANT SITE 1 STANDING | SITE 1 FREE FLOW | DISTRIBUTION SYSTEM SITE 3 STANDING | SITE 3 FREE FLOW | SITE 2 STANDING | SITE 2 FREE FLOW | SITE 4 STANDING | SITE 4 FREE FLOW |
|---|---|---|---|---|---|---|---|---|---|---|
| FEB | 25.000 | 23.000 | 26.000 | 26.000 | . | . | . | . | . | . |
| MAR | 25.000 | 23.000 | 26.000 | 25.000 | . | . | 24.000 | 24.000 | . | . |
| MAY | 23.000 | 24.000 | 27.000 | 26.000 | . | . | . | . | . | . |
| JUN | 25.000 | 23.000 | . | . | . | . | . | . | . | . |
| JUL | 25.000 | 26.000 | . | . | . | . | . | . | 27.000 | 26.000 |
| AUG | 24.000 | 25.000 | . | . | 27.000 | 29.000 | . | . | 24.000 | IIP |
| SEP | 25.000 | 47.000 | . | . | 26.000 | 28.000 | . | . | 25.000 | 25.000 |
| OCT | 25.000 | 23.000 | . | . | 28.000 | 27.000 | . | . | 24.000 | 24.000 |
| NOV | 22.000 | 23.000 | . | . | 24.000 | 24.000 | . | . | 22.000 | 23.000 |
| DEC | 24.000 | 23.000 | . | . | . | 24.000 | . | . | . | . |
| TITANIUM (UG/L ) | | | DET'N LIMIT = .050 GUIDELINE = N/A | | | | | | | |
| JAN | 3.000 | 2.300 | 2.500 | 2.300 | . | . | 2.400 | 2.800 | . | . |
| FEB | 3.200 | 2.900 | 2.900 | 2.900 | . | . | . | . | . | . |
| MAR | 3.200 | 2.700 | 2.800 | 2.300 | . | . | 2.200 | 2.500 | . | . |
| MAY | 4.200 | 4.400 | 4.200 | 4.200 | . | . | . | . | . | . |
| JUN | 5.300 | 4.900 | . | . | . | . | . | . | . | . |
| JUL | 4.500 | 3.600 | . | . | . | . | . | . | 3.800 | 3.800 |
| AUG | 4.300 | 3.700 | . | . | 3.700 | 3.200 | . | . | 3.100 | IIP |
| SEP | 4.500 | 3.500 | . | . | 4.200 | 4.300 | . | . | 4.100 | 4.200 |
| OCT | 2.600 | 2.400 | . | . | 2.300 | 2.500 | . | . | 2.100 | 2.300 |
| NOV | 2.000 <T | 1.800 <T | . | . | 1.700 <T | 1.700 <T | . | . | 1.800 <T | 1.700 <T |
| DEC | 2.800 <T | 1.900 <T | . | . | . | 2.000 <T | . | . | . | . |
| THALLIUM (UG/L ) | | | DET'N LIMIT = .010 GUIDELINE = 13. (D4) | | | | | | | |
| JAN | .020 <T | BDL | .020 <T | BDL | . | . | BDL | BDL | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .060 <T | .050 <T | .030 <T | .070 <T | . | . | . | . | . | . |
| MAR | BDL | BDL | .040 <T | BDL | . | . | .030 <T | BDL | . | . |
| MAY | .020 <T | .050 <T | .080 <T | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | BDL | BDL |
| AUG | .020 <T | .020 <T | . | . | BDL | .020 <T | . | . | BDL | IIP |
| SEP | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| OCT | BDL | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| NOV | BDL | BDL | . | . | .020 <T | BDL | . | . | BDL | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |
| URANIUM (UG/L ) | DET'N LIMIT = .020 GUIDELINE = 100.(81) | | | | | | | | | |
| JAN | .060 <T | BDL | BDL | BDL | . | . | .030 <T | .030 <T | . | . |
| FEB | .100 <T | .060 <T | BDL | BDL | . | . | . | . | . | . |
| MAR | .100 <T | .070 <T | .090 <T | .040 <T | . | . | .040 <T | .050 <T | . | . |
| MAY | .070 <T | .050 <T | .030 <T | .030 <T | . | . | . | . | . | . |
| JUN | .050 <T | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | .030 <T | . | . | . | . | . | . | BDL | BDL |
| AUG | .070 <T | BDL | . | . | .090 <T | .040 <T | . | . | .060 <T | IIP |
| SEP | .090 <T | .050 <T | . | . | BDL | BDL | . | . | .040 <T | .040 |
| OCT | .050 <T | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| NOV | .030 <T | BDL | . | . | BDL | BDL | . | . | BDL | BDL |
| DEC | .070 <T | BDL | . | . | . | BDL | . | . | . | . |
| VANADIUM (UG/L ) | DET'N LIMIT = .050 GUIDELINE = N/A | | | | | | | | | |
| JAN | .120 <T | .370 <T | .320 <T | .290 <T | . | . | .310 <T | .530 | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| FEB | .310 <T | .570 | .510 | .490 <T | . | . | . | . | . | . |
| MAR | .310 <T | .470 <T | .470 <T | .490 <T | . | . | .490 <T | .470 <T | . | . |
| MAY | .280 <T | .520 | .530 | .430 <T | . | . | . | . | . | . |
| JUN | .300 <T | .580 | . | . | . | . | . | . | . | . |
| JUL | .370 <T | .630 | . | . | . | . | . | . | . | . |
| AUG | .370 <T | .560 | . | . | .530 | .630 | . | . | .640 | .620 |
| SEP | .240 <T | .520 | . | . | .500 <T | .520 | . | . | .500 <T | IIP |
| OCT | .230 <T | .480 <T | . | . | .370 <T | .460 <T | . | . | .490 <T | .440 <T |
| NOV | .250 <T | .480 <T | . | . | .480 <T | .470 <T | . | . | .370 <T | .400 <T |
| DEC | .330 <T | .600 | . | . | . | .530 | . | . | .380 <T | .410 <T |
| ZINC (UG/L ) | | | DET'N LIMIT = .001 GUIDELINE = 5000. (A3) | | | | | | | |
| JAN | 1.100 | .530 <T | 9.300 | 1.000 <T | . | . | 1.300 | 1.100 | . | . |
| FEB | 1.200 | .610 <T | 12.000 | 2.400 | . | . | . | . | . | . |
| MAR | 1.300 | .760 <T | 9.600 | 1.500 | . | . | 11.000 | 2.000 | . | . |
| MAY | 1.900 | 1.700 | 19.000 | 2.300 | . | . | . | . | . | . |
| JUN | 2.500 | 1.600 | . | . | . | . | . | . | . | . |
| JUL | 1.700 | .830 <T | . | . | . | . | . | . | . | . |
| AUG | 1.800 | .870 <T | . | . | 21.000 | 3.000 | . | . | 32.000 | 2.200 |
| SEP | 1.900 | .180 <T | . | . | 4.100 | 3.100 | . | . | 23.000 | IIP |
| OCT | 1.700 | .380 <T | . | . | 6.300 | 3.800 | . | . | 9.900 | 4.300 |
| NOV | 1.600 | 1.100 | . | . | 5.000 | 3.700 | . | . | 18.000 | 16.000 |
| DEC | 2.300 | .610 <T | . | . | . | 3.400 | . | . | 1.800 | 2.500 |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| **PESTICIDES & PCB** | | | | | | | | | | |
| ALPHA BHC (NG/L ) | | | DET'N LIMIT = 1.000 | | GUIDELINE = 700 (G) | | | | | |
| JAN | 4.000 <T | BDL | . | BDL | . | . | . | 4.000 <T | . | . |
| FEB | 5.000 <T | BDL | . | 6.000 <T | . | . | . | . | . | . |
| MAR | 3.000 <T | 3.000 <T | . | 3.000 <T | . | . | . | 4.000 <T | . | . |
| MAY | BDL | BDL | . | 3.000 <T | . | . | . | . | . | . |
| JUN | 6.000 <T | 10.000 <T | . | . | . | . | . | . | . | . |
| JUL | 6.000 <T | BDL | . | . | . | . | . | . | . | 5.000 <T |
| AUG | 4.000 <T | 5.000 <T | . | . | . | BDL | . | . | . | IQU |
| SEP | 5.000 <T | 4.000 <T | . | . | . | 5.000 <T | . | . | . | 5.000 <T |
| OCT | 3.000 <T | 3.000 <T | . | . | . | 2.000 <T | . | . | . | 3.000 <T |
| NOV | 1.000 <T | BDL | . | . | . | BDL | . | . | . | BDL |
| DEC | 5.000 <T | 3.000 <T | . | . | . | 5.000 <T | . | . | . | . |
| LINDANE (NG/L ) | | | DET'N LIMIT = 1.000 | | GUIDELINE = 4000 (A1) | | | | | |
| JAN | BDL | BDL | . | BDL | . | . | . | BDL | . | . |
| FEB | 1.000 <T | BDL | . | BDL | . | . | . | . | . | . |
| MAR | BDL | BDL | . | BDL | . | . | . | 1.000 <T | . | . |
| MAY | BDL | BDL | . | BDL | . | . | . | . | . | . |
| JUN | BDL | 2.000 <T | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | BDL |
| AUG | BDL | BDL | . | . | . | . | . | . | . | IQU |
| SEP | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| OCT | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| NOV | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| DEC | BDL | BDL | . | . | . | BDL | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | RAW | TREATED | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| PHENOLICS (UG/L) | PHENOLICS | | DET'N LIMIT = 0.2 | | GUIDELINE = 2.00 (A3) | | | | | |
| JAN | 1.600 | 1.000 | . | . | . | . | . | . | . | . |
| FEB | 1.200 | .600 | . | . | . | . | . | . | . | . |
| MAR | .600 <T | .400 <T | . | . | . | . | . | . | . | . |
| MAY | .600 <T | 1.000 | . | . | . | . | . | . | . | . |
| JUN | .400 <T | .800 <T | . | . | . | . | . | . | . | . |
| JUL | .800 <T | 1.200 | . | . | . | . | . | . | . | . |
| AUG | 4.600 | 1.200 | . | . | . | . | . | . | . | . |
| SEP | 2.400 | 1.000 | . | . | . | . | . | . | . | . |
| OCT | 1.000 <T | 1.000 <T | . | . | . | . | . | . | . | . |
| NOV | .800 <T | BDL | . | . | . | . | . | . | . | . |
| DEC | 1.200 | .600 <T | . | . | . | . | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SITE | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| VOLATILES | | | | | | | | | | |
| BENZENE (UG/L ) | | | | DET'N LIMIT = .050 GUIDELINE = 5.0 (81) | | | | | | |
| FEB | BDL | BDL | . | BDL | . | . | . | . | . | . |
| MAR | BDL | BDL | . | BDL | . | . | . | BDL | . | . |
| MAY | BDL | BDL | . | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | . |
| AUG | BDL | .100 <T | . | . | . | BDL | . | . | . | BDL |
| SEP | BDL | BDL | . | . | . | IU | . | . | . | BDL |
| OCT | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| NOV | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| DEC | . | . | . | . | . | BDL | . | . | . | . |
| TOLUENE (UG/L ) | | | | DET'N LIMIT = .050 GUIDELINE = 24.0 (84) | | | | | | |
| FEB | BDL | BDL | . | BDL | . | . | . | . | . | . |
| MAR | BDL | BDL | . | BDL | . | . | . | BDL | . | . |
| MAY | BDL | BDL | . | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | . |
| AUG | .050 <T | BDL | . | . | . | BDL | . | . | . | BDL |
| SEP | .100 <T | BDL | . | . | . | IU | . | . | . | BDL |
| OCT | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| NOV | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| DEC | . | . | . | . | . | .050 <T | . | . | . | . |
| ETHYLBENZENE (UG/L ) | | | | DET'N LIMIT = .050 GUIDELINE = 2.4 (84) | | | | | | |
| FEB | BDL | BDL | . | BDL | . | . | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| MAR | .050 <T | BDL | . | BDL | . | . | . | BDL | . | . |
| MAY | BDL | BDL | . | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | BDL |
| AUG | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| SEP | BDL | BDL | . | . | . | IU | . | . | . | BDL |
| OCT | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| NOV | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| DEC | . | . | . | . | . | BDL | . | . | . | . |
| O-XYLENE (UG/L ) | | | DET'N LIMIT = .050 GUIDELINE = 300 (B4) | | | | | | | |
| FEB | BDL | BDL | . | BDL | . | . | . | . | . | . |
| MAR | BDL | BDL | . | BDL | . | . | . | BDL | . | . |
| MAY | BDL | BDL | . | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | BDL |
| AUG | BDL | BDL | . | . | . | .100 <T | . | . | . | BDL |
| SEP | BDL | BDL | . | . | . | IU | . | . | . | BDL |
| OCT | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| NOV | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| DEC | . | . | . | . | . | .050 <T | . | . | . | . |
| STYRENE (UG/L ) | | | DET'N LIMIT = .050 GUIDELINE = 46.5 (D2) | | | | | | | |
| FEB | .200 <T | BDL | . | BDL | . | . | . | . | . | . |
| MAR | .300 <T | BDL | . | BDL | . | . | . | BDL | . | . |
| MAY | .100 <T | BDL | . | BDL | . | . | . | . | . | . |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| | | | | | | | | | | |
| JUN | .150 <T | BDL | . | . | . | . | . | . | . | . |
| JUL | .150 <T | BDL | . | . | . | . | . | . | . | BDL |
| AUG | .100 <T | BDL | . | . | . | . | . | . | . | BDL |
| SEP | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| OCT | BDL | .300 <T | . | . | . | IU | . | . | . | .200 < |
| NOV | .200 <T | .100 <T | . | . | . | BDL | . | . | . | BDL |
| DEC | . | . | . | . | . | BDL | . | . | . | . |
| | | | | | | .050 <T | | | | |
| CHLOROFORM (UG/L ) | | | DET'N LIMIT = .100 GUIDELINE = 350 (A1+) | | | | | | | |
| FEB | .200 <T | 31.000 | . | 27.400 | . | . | . | . | . | . |
| MAR | .300 <T | 33.800 | . | 40.200 | . | . | . | 44.200 | . | . |
| MAY | .700 <T | 37.500 | . | 43.600 | . | . | . | . | . | . |
| JUN | BDL | 44.400 | . | . | . | . | . | . | . | . |
| JUL | 1.300 | 44.900 | . | . | . | . | . | . | . | 60.400 |
| AUG | .300 <T | 35.100 | . | . | . | 62.100 | . | . | . | 53.000 |
| SEP | .200 <T | 52.000 | . | . | . | IU | . | . | . | 41.300 |
| OCT | BDL | 39.400 | . | . | . | 48.400 | . | . | . | 43.500 |
| NOV | BDL | 42.300 | . | . | . | 43.300 | . | . | . | 26.800 |
| DEC | . | . | . | . | . | 36.800 | . | . | . | . |
| 111, TRICHLOROETHANE (UG/L ) | | | DET'N LIMIT = .020 GUIDELINE = 200 (D1) | | | | | | | |
| FEB | BDL | BDL | . | BDL | . | . | . | . | . | . |
| MAR | .180 <T | .200 | . | .140 <T | . | . | . | .340 | . | . |
| MAY | BDL | BDL | . | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | BDL |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | RAW | TREATED | WATER TREATMENT PLANT SITE 1 STANDING | SITE 1 FREE FLOW | SITE 3 STANDING | SITE 3 FREE FLOW | DISTRIBUTION SYSTEM SITE 2 STANDING | SITE 2 FREE FLOW | SITE 4 STANDING | SITE 4 FREE FLOW |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| SEP | BDL | BDL | . | . | . | IU | . | . | . | BDL |
| OCT | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| NOV | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| DEC | . | . | . | . | . | BDL | . | . | . | . |
| DICHLOROBROMOMETHANE (UG/L ) | | | | DET'N LIMIT = .050 GUIDELINE = 350 (A1+) | | | | | | |
| FEB | BDL | 4.750 | . | 4.100 | . | . | . | . | . | . |
| MAR | BDL | 4.550 | . | 5.200 | . | . | . | 5.600 | . | . |
| MAY | BDL | 3.700 | . | 4.300 | . | . | . | . | . | . |
| JUN | BDL | 4.850 | . | . | . | . | . | . | . | . |
| JUL | BDL | 4.250 | . | . | . | . | . | . | . | 5.250 |
| AUG | BDL | 4.450 | . | . | . | 5.250 | . | . | . | 4.900 |
| SEP | BDL | 4.900 | . | . | . | IU | . | . | . | 4.500 |
| OCT | BDL | 4.800 | . | . | . | 4.900 | . | . | . | 5.100 |
| NOV | BDL | 4.400 | . | . | . | 4.600 | . | . | . | 4.400 |
| DEC | . | . | . | . | . | 3.800 | . | . | . | . |
| CHLORODIBROMOMETHANE (UG/L ) | | | | DET'N LIMIT = .100 GUIDELINE = 350 (A1+) | | | | | | |
| FEB | BDL | .500 <T | . | .400 <T | . | . | . | . | . | . |
| MAR | BDL | .500 <T | . | .500 <T | . | . | . | .500 <T | . | . |
| MAY | BDL | .300 <T | . | .500 <T | . | . | . | . | . | . |
| JUN | BDL | .700 <T | . | . | . | . | . | . | . | . |
| JUL | BDL | .400 <T | . | . | . | . | . | . | . | .600 < |
| AUG | BDL | .500 <T | . | . | . | .500 <T | . | . | . | BDL |
| SEP | BDL | .500 <T | . | . | . | IU | . | . | . | .500 < |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE | WATER TREATMENT PLANT | | DISTRIBUTION SYSTEM | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| TYPE | RAW | TREATED | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| OCT | BDL | .600 <T | . | . | . | .700 <T | . | . | . | .400 <T |
| NOV | BDL | 1.200 | . | . | . | .700 <T | . | . | . | .800 <T |
| DEC | . | . | . | . | . | .500 <T | . | . | . | . |
| BROMOFORM (UG/L ) | | | DET'N LIMIT = .200 GUIDELINE = 350 (A1+) | | | | | | | |
| FEB | BDL | BDL | . | BDL | . | . | . | . | . | . |
| MAR | BDL | BDL | . | BDL | . | . | . | BDL | . | . |
| MAY | BDL | BDL | . | BDL | . | . | . | . | . | . |
| JUN | BDL | BDL | . | . | . | . | . | . | . | . |
| JUL | BDL | BDL | . | . | . | . | . | . | . | . |
| AUG | BDL | BDL | . | . | . | . | . | . | . | . |
| SEP | BDL | BDL | . | . | . | BDL | . | . | . | BDL |
| OCT | BDL | BDL | . | . | . | IU | . | . | . | BDL |
| NOV | BDL | .400 <T | . | . | . | BDL | . | . | . | BDL |
| DEC | . | . | . | . | . | BDL | . | . | . | BDL |
| TOTL TRIHALOMETHANES (UG/L ) | | | DET'N LIMIT = .500 GUIDELINE = 350 (A1) | | | | | | | |
| FEB | BDL | 36.250 | . | 31.900 | . | . | . | . | . | . |
| MAR | BDL | 35.850 | . | 45.900 | . | . | . | 50.300 | . | . |
| MAY | .700 <T | 41.500 | . | 48.400 | . | . | . | . | . | . |
| JUN | BDL | 49.950 | . | . | . | . | . | . | . | . |
| JUL | 1.300 <T | 49.550 | . | . | . | . | . | . | . | . |
| AUG | BDL | 40.050 | . | . | . | . | . | . | . | . |
| SEP | BDL | 57.400 | . | . | . | 67.850 | . | . | . | 66.250 |
| OCT | BDL | 44.800 | . | . | . | IU | . | . | . | 57.900 |
| NOV | BDL | 48.300 | . | . | . | 54.000 | . | . | . | 46.300 |
| | | | . | . | . | 48.600 | . | . | . | 49.000 |
| | | | | | | | | | . | 32.000 |

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM THUNDER BAY (BARE POINT WTP) 1989

| SITE TYPE | RAW | TREATED | WATER TREATMENT PLANT | | | | DISTRIBUTION SYSTEM | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | SITE 1 | | SITE 3 | | SITE 2 | | SITE 4 | |
| | | | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW | STANDING | FREE FLOW |
| DEC | . | . | . | . | . | 41,100 | . | . | . | . |

TRACE LEVELS OF TOLUENE ARE LABORATORY ARTIFACTS DERIVED FROM THE ANALYTICAL METHODOLOGY.

TRACE LEVELS OF STYRENE ARE CONSIDERED TO BE LABORATORY ARTIFACTS RESULTING FROM THE LABORATORY SHIPPING CONTAINERS.

Table 6

| SCAN/PARAMETER | UNIT | DETECTION LIMIT | GUIDELINE |
|---|---|---|---|
| **BACTERIOLOGICAL** | | | |
| FECAL COLIFORM MEMBRANE FILTRATION | CT/100ML | 0 | 0 (A1) |
| STANDARD PLATE COUNT MEMBRANE FILTRATION | CT/ML | 0 | 500/ML(A1) |
| TOTAL COLIFORM MEMBRANE FILTRATION | CT/100ML | 0 | 5/100mL(A1) |
| TOTAL COLIFORM BACKGROUND MF | CT/100ML | 0 | N/A |
| **CHLOROAROMATICS** | | | |
| HEXACHLOROBUTADIENE | NG/L | 1.000 | 450. (D4) |
| 1,2,3-TRICHLOROBENZENE | NG/L | 5.000 | 10000 (I) |
| 1,2,3,4-TETRACHLOROBENZENE | NG/L | 1.000 | 10000 (I) |
| 1,2,3,5-TETRACHLOROBENZENE | NG/L | 1.000 | 10000 (I) |
| 1,2,4-TRICHLOROBENZENE | NG/L | 5.000 | 10000 (I) |
| 1,2,4,5-TETRACHLOROBENZENE | NG/L | 1.000 | 38000 (D4) |
| 1,3,5-TRICHLOROBENZENE | NG/L | 5.000 | 10000 (D4) |
| HEXACHLOROBENZENE | NG/L | 1.0 | 10. (C1) |
| HEXACHLOROETHANE | NG/L | 1.000 | 1900. (D4) |
| OCTACHLOROSTYRENE | NG/L | 1.000 | N/A |
| PENTACHLOROBENZENE | NG/L | 1.000 | 74000 (D4) |
| 2,3,6-TRICHLOROTOLUENE | NG/L | 5.000 | N/A |
| 2,4,5-TRICHLOROTOLUENE | NG/L | 5.000 | N/A |
| 2,6,A-TRICHLOROTOLUENE | NG/L | 5.000 | N/A |
| **CHLOROPHENOLS** | | | |
| 2,3,4-TRICHLOROPHENOL | NG/L | 50. | N/A |
| 2,3,4,5-TETRACHLOROPHENOL | NG/L | 50. | N/A |
| 2,3,5,6-TETRACHLOROPHENOL | NG/L | 50. | N/A |
| 2,4,5-TRICHLOROPHENOL | NG/L | 50. | 2600000 (D4) |
| 2,4,6-TRICHLOROPHENOL | NG/L | 50. | 2000. (B4) |
| PENTACHLOROPHENOL | NG/L | 50. | 30000. (B4) |
| **CHEMISTRY (FLD)** | | | |
| FIELD COMBINED CHLORINE RESIDUAL | MG/L | N/A | N/A |
| FIELD FREE CHLORINE RESIDUAL | MG/L | N/A | N/A |
| FIELD TOTAL CHLORINE RESIDUAL | MG/L | N/A | N/A |
| FIELD PH | DMSNLESS | N/A | 6.5-8.5(A4) |
| FIELD TEMPERATURE | °C | N/A | <15 °C(A1) |
| FIELD TURBIDITY | FTU | N/A | 1.0 (A1) |
| **CHEMISTRY (LAB)** | | | |
| ALKALINITY | MG/L | .200 | 30-500(A4) |
| CALCIUM | MG/L | .100 | 100. (F2) |
| CYANIDE | MG/L | .001 | .20(A1) |
| CHLORIDE | MG/L | .200 | 250. (A3) |
| COLOUR | TCU | .5 | 5.0 (A3) |
| CONDUCTIVITY | UMHO/CM | 1. | 400. (F2) |
| FLUORIDE | MG/L | .01 | 2.4 (A1) |
| HARDNESS | MG/L | .50 | 80-100(A4) |
| MAGNESIUM | MG/L | .05 | 30. (F2) |

| SCAN/PARAMETER | UNIT | DETECTION LIMIT | GUIDELINE |
|---|---|---|---|
| NITRITE | MG/L | .001 | 1.0 (A1) |
| TOTAL NITRATES | MG/L | .02 | 10. (A1) |
| NITROGEN TOTAL KJELDAHL | MG/L | .02 | N/A |
| PH | DMSNLESS | N/A | 6.5-8.5(A4) |
| PHOSPHORUS FIL REACT | MG/L | .0005 | N/A |
| PHOSPHORUS TOTAL | MG/L | .002 | .40(F2) |
| TOTAL SOLIDS | MG/L | 1. | 500. (A3) |
| TURBIDITY | FTU | .02 | 1.0 (A1) |
| **METALS** | | | |
| ALUMINUM | UG/L | .050 | 100. (A4) |
| ANTIMONY | UG/L | .050 | 10. (F3) |
| ARSENIC | UG/L | .050 | 50. (A1) |
| BARIUM | UG/L | .020 | 1000. (A1) |
| BORON | UG/L | .200 | 5000. (A1) |
| BERYLLIUM | UG/L | .010 | 0.20 (H) |
| CADMIUM | UG/L | .050 | 5.0 (A1) |
| COBALT | UG/L | .020 | 1000. (H) |
| CHROMIUM | UG/L | .100 | 50. (A1) |
| COPPER | UG/L | .100 | 1000. (A3) |
| IRON | UG/L | 5.0 | 300. (A3) |
| MERCURY | UG/L | .01 | 1.0 (A1) |
| MANGANESE | UG/L | .050 | 50. (A3) |
| MOLYBDENUM | UG/L | .020 | 500. (H) |
| NICKEL | UG/L | .100 | 50. (F3) |
| LEAD | UG/L | .020 | 50. (A1) |
| SELENIUM | UG/L | .200 | 10. (A1) |
| SILVER | UG/L | .020 | 50. (A1) |
| STRONTIUM | UG/L | .100 | 2000. (H) |
| THALLIUM | UG/L | .010 | 13. (D4) |
| TITANIUM | UG/L | .100 | N/A |
| URANIUM | UG/L | .020 | 20. (A2) |
| VANADIUM | UG/L | .020 | 100. (H) |
| ZINC | UG/L | .020 | 5000. (A3) |
| **PHENOLICS** | | | |
| PHENOLICS (UNFILTERED REACTIVE) | UG/L | .2 | 2.0 (A3) |
| **PESTICIDES & PCB** | | | |
| ALDRIN | NG/L | 1.0 | 700. (A1) |
| AMETRINE | NG/L | 50. | 300000. (D3) |
| ATRAZINE | NG/L | 50. | 60000. (B3) |
| ALPHA HEXACHLOROCYCLOHEXANE (BHC) | NG/L | 1.0 | 700. (G) |
| BETA HEXACHLOROCYCLOHEXANE (BHC) | NG/L | 1.0 | 300. (G) |
| GAMMA HEXACHLOROCYCLOHEXANE(LINDANE) | NG/L | 1.0 | 4000. (A1) |
| ALPHA CHLORDANE | NG/L | 2.0 | 7000. (A1) |
| GAMMA CHLORDANE | NG/L | 2.0 | 7000. (A1) |
| BLADEX | NG/L | 100. | 10000. (B3) |
| DIELDRIN | NG/L | 2.0 | 700. (A1) |
| METHOXYCHLOR | NG/L | 5.0 | 900000. (B1) |
| ENDOSULFAN 1 (THIODAN I) | NG/L | 2.0 | 74000. (D4) |
| ENDOSULFAN 2 (THIODAN II) | NG/L | 4.0 | 74000. (D4) |
| ENDRIN | NG/L | 4.0 | 200. (A1) |
| ENDOSULFAN SULPHATE(THIODAN SULPHATE) | NG/L | 4.0 | N/A |
| HEPTACHLOR EPOXIDE | NG/L | 1.0 | 3000. (A1) |

| SCAN/PARAMETER | UNIT | DETECTION LIMIT | GUIDELINE | |
|---|---|---|---|---|
| HEPTACHLOR | NG/L | 1.0 | 3000. | (A1) |
| METOLACHLOR | NG/L | 500. | 50000. | (B3) |
| MIREX | NG/L | 5.0 | N/A | |
| OXYCHLORDANE | NG/L | 2.0 | N/A | |
| O,P-DDT | NG/L | 5.0 | 30000. | (A1) |
| PCB | NG/L | 20.0 | 3000. | (A2) |
| O,P-DDD | NG/L | 5.0 | N/A | |
| PPDDE | NG/L | 1.0 | 30000. | (A1) |
| PPDDT | NG/L | 5.0 | 30000. | (A1) |
| ATRATONE | NG/L | 50. | N/A | |
| ALACHLOR | NG/L | 500. | 35000. | (D2) |
| PROMETONE | NG/L | 50. | 52500. | (D3) |
| PROPAZINE | NG/L | 50. | 16000. | (D2) |
| PROMETRYNE | NG/L | 50. | 1000. | (B3) |
| SENCOR (METRIBUZIN) | NG/L | 100. | 80000. | (B2) |
| SIMAZINE | NG/L | 50. | 10000. | (B3) |
| **POLYAROMATIC HYDROCARBONS** | | | | |
| PHENANTHRENE | NG/L | 10.0 | N/A | |
| ANTHRACENE | NG/L | 1.0 | N/A | |
| FLUORANTHENE | NG/L | 20.0 | 42000. | (D4) |
| PYRENE | NG/L | 20.0 | N/A | |
| BENZO(A)ANTHRACENE | NG/L | 20.0 | N/A | |
| CHRYSENE | NG/L | 50.0 | N/A | |
| DIMETHYL BENZO(A)ANTHRACENE | NG/L | 5.0 | N/A | |
| BENZO(E)PYRENE | NG/L | 50.0 | N/A | |
| BENZO(B)FLUORANTHENE | NG/L | 10.0 | N/A | |
| PERYLENE | NG/L | 10.0 | N/A | |
| BENZO(K)FLUORANTHENE | NG/L | 1.0 | N/A | |
| BENZO(A)PYRENE | NG/L | 5.0 | 10. | (B1) |
| BENZO(G,H,I)PERYLENE | NG/L | 20.0 | N/A | |
| DIBENZO(A,H)ANTHRACENE | NG/L | 10.0 | N/A | |
| INDENO(1,2,3-C,D)PYRENE | NG/L | 20.0 | N/A | |
| BENZO(B)CHRYSENE | NG/L | 2.0 | N/A | |
| CORONENE | NG/L | 10.0 | N/A | |
| **SPECIFIC PESTICIDES** | | | | |
| TOXAPHENE | NG/L | N/A | 5000. | (A1) |
| 2,4,5-TRICHLOROBUTYRIC ACID (2,4,5-T) | NG/L | 50. | 200000. | (B4) |
| 2,4-DICHLOROBUTYRIC ACID (2,4-D) | NG/L | 100. | 100000. | (A1) |
| 2,4-DICHLORORPHENOXYBUTYRIC ACID | NG/L | 200. | 18000. | (B3) |
| 2,4-D PROPIONIC ACID | NG/L | 100. | N/A | |
| DICAMBA | NG/L | 100. | 120000. | (B1) |
| PICLORAM | NG/L | 100. | 190000. | (B3) |
| SILVEX (2,4,5-TP) | NG/L | 50. | 10000. | (A1) |
| DIAZINON | NG/L | 20. | 20000. | (B1) |
| DICHLOROVOS | NG/L | 20. | N/A | |
| DURSBAN | NG/L | 20. | N/A | |
| ETHION | NG/L | 20. | 35000. | (G) |
| GUTHION(AZINPHOSMETHYL) | NG/L | N/A | 20000. | (B1) |
| MALATHION | NG/L | 20. | 190000. | (B1) |
| MEVINPHOS | NG/L | 20. | N/A | |
| METHYL PARATHION | NG/L | 50. | 7000. | (A1) |
| METHYLTRITHION | NG/L | 20. | N/A | |
| PARATHION | NG/L | 20. | 50000. | (B1) |

| SCAN/PARAMETER | UNIT | DETECTION LIMIT | GUIDELINE |
|---|---|---|---|
| PHORATE (THIMET) | NG/L | 20. | 2000. (B3) |
| RELDAN | NG/L | 20. | N/A |
| RONNEL | NG/L | 20. | N/A |
| AMINOCARB | NG/L | N/A | N/A |
| BENONYL | NG/L | N/A | N/A |
| BUX (METALKAMATE) | NG/L | 2000. | N/A |
| CARBOFURAN | NG/L | 2000. | 90000. (B1) |
| CICP (CHLORPROPHAM) | NG/L | 2000. | 350000. (G) |
| DIALLATE | NG/L | 2000. | 30000. (H) |
| EPTAM | NG/L | 2000. | N/A |
| IPC | NG/L | 2000. | N/A |
| PROPOXUR (BAYGON) | NG/L | 2000. | 90000. (G) |
| SEVIN (CARBARYL) | NG/L | 200. | 90000. (B1) |
| SUTAN (BUTYLATE) | NG/L | 2000. | 245000. (D3) |
| **VOLATILES** | | | |
| BENZENE | UG/L | .050 | 5.0 (B1) |
| TOLUENE | UG/L | .050 | 24.0 (B4) |
| ETHYLBENZENE | UG/L | .050 | 2.4 (B4) |
| PARA-XYLENE | UG/L | .100 | 300. (B4) |
| META-XYLENE | UG/L | .100 | 300. (B4) |
| ORTHO-XYLENE | UG/L | .050 | 300. (B4) |
| 1,1-DICHLOROETHYLENE | UG/L | .100 | 7.0 (D1) |
| ETHLYENE DIBROMIDE | UG/L | .05 | .05 G) |
| METHYLENE CHLORIDE | UG/L | .500 | 50. (B1) |
| TRANS-1,2-DICHLOROETHYLENE | UG/L | .100 | 70. (D5) |
| 1,1-DICHLOROETHANE | UG/L | .100 | N/A |
| CHLOROFORM | UG/L | .100 | 350. (A1+) |
| 1,1,1-TRICHLOROETHANE | UG/L | .020 | 200. (D1) |
| 1,2-DICHLOROETHANE | UG/L | .050 | 5.0 (D1) |
| CARBON TETRACHLORIDE | UG/L | .200 | 5.0 (B1) |
| 1,2-DICHLOROPROPANE | UG/L | .050 | 6.0 (D5) |
| TRICHLOROETHYLENE | UG/L | .100 | 50. (B1) |
| DICHLOROBROMOMETHANE | UG/L | .050 | 350. (A1+) |
| 1,1,2-TRICHLOROETHANE | UG/L | .050 | .60(D4) |
| CHLORODIBROMOMETHANE | UG/L | .100 | 350. (A1+) |
| TETRACHLOROETHYLENE | UG/L | .050 | 10.0 (C2) |
| BROMOFORM | UG/L | .200 | 350. (A1+) |
| 1,1,2,2-TETRACHLOROETHANE | UG/L | .050 | 0.17(D4) |
| CHLOROBENZENE | UG/L | .100 | 60. (D5) |
| 1,4-DICHLOROBENZENE | UG/L | .100 | 1.0 (B4) |
| 1,3-DICHLOROBENZENE | UG/L | .100 | 130. (G) |
| 1,2-DICHLOROBENZENE | UG/L | .050 | 3.0 (B4) |
| TRIFLUOROCHLOROTOLUENE | UG/L | .100 | N/A |
| TOTAL TRIHALOMETHANES | UG/L | .500 | 350. (A1) |
| STYRENE | UG/L | .05 | 140. (D5) |